

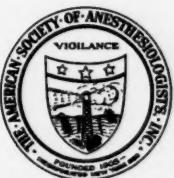
November-December 1967

Anesthesiology

The Journal of
The American Society of
Anesthesiologists, Inc.

Volume 28 • Number 6 • Part 2

INDEX



Published bimonthly at Prince and Lemon Streets, Lancaster, Pa., by J. B. Lippincott Company. Copyright © 1967, by The American Society of Anesthesiologists, Inc. Printed in United States of America. Second-class postage paid at Lancaster, Pennsylvania.

INDEX OF AUTHORS AND SUBJECTS • VOLUME 28

Index of Issues: January–February, pp. 1–294; March–April, pp. 295–484; May–June, pp. 485–648; July–August, pp. 649–798; September–October, pp. 799–968; November–December, pp. 969–1114.

Author entries for original articles include the titles of the articles and co-authors under the first author; reference is made from the joint authors.

Subject entries for all material in the JOURNAL (except Literature Briefs and Book Reviews) appear in this index. The name of the author of an original article, in brackets, follows the subject entry. Entries from the JOURNAL departments are identified by the departments in which the subject matter appears, i.e., Editorial, Current Comment (changed to Clinical Workshop) and Abstract.

Acetylcholine

ACh test in evaluating patient's ability to inactivate succinylcholine or other esters (clinical workshop), 1085

Acetylcysteine

stability of solutions to oxidation during nebulization [Hamlow & Peck], 934

ACHESON, F., see MOTOMAYAMA, E. K., jt. auth.

Acid-base balance: see also acidosis

(correspondence), 787

after blood transfusion (correspondence), 1110

in-vitro blood in evaluation of [Roos & Thomas], 1048

Acidosis: see also Acid-base balance

role in asphyxial death [Kristoffersen & others], 488

ADAMSONS, K., see MORISHIMA, H. O., jt. auth.

Aerosols

ultrasonic, effect on lung of chronic exposure to [Modell & others], 680

AHLGREN, E. W., and STEPHEN, C. R., A new mechanical ventilator for use during anesthesia (clinical workshop), 952

AKAMATSU, T. J., see FREUND, F. G., jt. auth.

ALANIS, J. M., see VIRTUE, R. W., jt. auth.

ALTER, H., see REHDER, K., jt. auth.

AMAHIA, K., LIU, P., WEITZNER, S. W., and HARMEL, M. H., Effects of constant chest compression on the mechanical and physiologic performance of different ventilators, 498

Ammonium salts

prolonged sensory block using (abstract), 244

ANDERSON, N. B., Synergistic effect of cyclopropane and epinephrine on sodium transport in toad bladder, 438

Anesthesia

alveolar arterial oxygen tension difference in anesthetized man [Bergman], 517

anesthetic equilibration, effects of hyperventilation on cerebral [Munson & Bowers], 377

anesthetic index (apnea/MAC), determination of [Regan & Eger], 689

and blood replacement, effects on glycolysis and citric acid cycle (abstract), 266

epidural, ventilatory reserve and motor block during [Freund & others], 834

epidural physiology and pharmacology of [Bromage], 592

functional residual capacity and dynamic lung compliance during measurement of [Colgan & Whang], 559

general, measurement of spinal reflex response during, in man [de Jong & others], 382

general, mechanisms of [Wall], 46

general, multiple, gastroesophageal reflux and spontaneous esophageal rupture following (clinical workshop), 782

general, nerve impulse conduction and cutaneous receptor responses during [de Jong & Nace], 851

halothane and beta-adrenergic blockade in management of pheochromocytoma [Cooperman & others], 575

hazard of intragastric cyclopropane (clinical workshop), 771

hicups during, treatment of (current comment), 463

history, Ralph M. Waters award lecture [Maggill], 202

injection, epidural, dural penetration following (abstract), 261

mechanism of neurophysiological studies of (editorial) [Wall], 799

neurophysiology of [Winters & others], 65

regional, assessment of place in therapeutics [Papper], 1074

respiratory work during (abstract), 273

spinal, neurologic deficit following (clinical workshop), 785

spinal, physiologic treatment of hypotension associated with (abstract), 276

spinal, high, ventilatory reserve and motor block during [Freund & others], 834

techniques, micromethods in neuropharmacology [Salmoiragh & Weight], 54

theory, correlation with of minimum alveolar concentrations of anesthetic agents [Saidman & others], 994

for thoracic surgery (editorial) [Bendixen], 649

Anesthesiology

scope of clinical practice of (editorial) [Papper], 969

Anesthetic agents: see also specific agents and compounds

effects on blood levels of glucose, pyruvate, lactate, and metabolites of the citric acid cycle [Schweizer & others], 814

- effects on cortical units [Robson], 144
- effects on mammalian spinal cord [Somjen], 135
- effects on neurons [Chalazonitis], 111
- effects on visually evoked responses [Domino], 184
- epidural analgesia, pharmacology of [Bromage], 592
- ganglion-blocking potencies of cyclopropane, halothane and nitrous oxide [Price & Price], 349
- gas chromatographic determination in blood [Pratt & others], 432
- hydrocarbon anesthetic agents, determination in blood by gas chromatography [Butler & others], 760
- inhalation, direct injection method for gas chromatographic measurement of in blood and tissues [Yokota & others], 1064
- inhalation, effects of hypothermia on in dogs [Regan & Eger], 689
- inhalation, effects on forearm blood flow (abstract), 271
- inhalation, effects on motor nerve activity [Van Poznak], 124
- local, synergistic toxicity of (abstract), 238
- minimum alveolar concentrations of methoxyflurane, halothane, ether, and cyclopropane in man: correlation with theories of anesthesia [Saidman & others], 994
- muscle relaxants and renal excretion [Churchill-Davidson & others], 540
- nerve impulse conduction and cutaneous receptor responses during general anesthesia [de Jong & Nace], 851
- neurophysiology of anesthesia [Winters & others], 65
- new, C1-581 (abstract), 258
- new, CI-581 [Virtue & others], 823
- spinal reflex response during general anesthesia in man [de Jong & others], 382
- subanesthetic concentrations of halothane and methoxyflurane, effect on pain threshold [Siker & others], 337
- toxic effects, symposium on (report of meeting), 956
- uptake and distribution in mice and rats (abstract), 260
- volatile, actions on neurons [Calazonitis], 111
- volatile, effects on neuromuscular transmission [Karis & others], 128
- Anoxia: see Oxygen
- Anti-arrhythmic agents
- potency of dehydrobenzperidol [Long & others], 318
- Apparatus and equipment
- anesthetic machine for small mammals (current comment), 217
- atomizer, self-powered (clinical workshop), 625
- blood volume, detection of changes in [Underwood & others], 426
- breathing tube, defect in (current comment), 471
- breathing tubes, bailing device for removing condensate from (clinical workshop), 951
- cannula, cricothyrotomy (clinical workshop), 943
- carbon dioxide response, bedside measurement of (clinical workshop), 624
- catheter, venous, placement in peripheral vein (clinical workshop), 1093
- catheters, suction, with side arms [Saklad & Paliotta], 652
- connector, endobronchial tube, new double-lumen (clinical workshop), 950
- defects in "simple" equipment (current comment), 471
- densitometer, cuvette, modified (clinical workshop), 1101
- electrical, hazards of (review), 396
- electrode, used to measure blood O₂ content (clinical workshop), 773
- endotracheal tube, pediatric, factors affecting size (clinical workshop), 779
- endotracheal tubes, trans-endotracheal tube suction in simulated breathing patient [Saklad & Paliotta], 652
- epiglottic elevator (current comment), 214
- frame, turning, Stryker with portable IPPB (clinical workshop), 626
- functional residual capacity and dynamic lung compliance, method for measuring during anesthesia [Colgan & Whang], 559
- gas chromatography in determination of mepivacaine in blood [Pratt & others], 432
- gas chromatography in measurement of inhalation anesthetics in blood and tissues, direct injection method [Yokota & others], 1064
- helium meter, use in measuring functional residual capacity during anesthesia [Colgan & Whang], 559
- inhaler, Cyprane, methoxyflurane concentrations from (clinical workshop), 770
- intrathecal block, positioning guide for (clinical workshop), 627
- IPPB, portable, with Stryker Frame (clinical workshop), 626
- laryngoscopy, epiglottic elevator (current comment), 214
- leg holder, Zollinger, used to position psychiatric patients for spinal and epidural anesthesia (current comment), 464
- litter mount, Air Evac, with Stryker frame (clinical workshop), 626
- micromethods in neuropharmacology [Salmoiraghi & Weight], 54
- nasogastric tube, insertion before gastroesophageal reflux and spontaneous esophageal rupture (clinical workshop), 782
- nebulizer, convenient and accurate (clinical workshop), 1102
- nerve stimulator, for isolated block of nerves in spasticity (current comment), 219
- neuromuscular blockade, technique for evaluating in man (current comment), 215

- Pulmonet, Godart, in measuring functional residual capacity during anesthesia [Colgan & Whang], 559
- rebreathing in pediatric anesthesia systems (abstract), 241
- rebreathing tube, evaluation of for preventing atelectasis (current comment), 211
- respirators, pressure-cycled, effects of varying pressure and flow rate settings (clinical workshop), 1096
- respirators, selection of (editorial), (Singer), 485
- resuscitator, Elder demand valve (clinical workshop), 623
- Scholander apparatus, analysis of oxygen, carbon dioxide and nitrous oxide mixtures with [Forbes & others], 928
- shoes, conductive (clinical workshop), 954
- transducer holder, simplified (current comment), 213
- ventilator, Bird, inspired oxygen concentration delivered by (current comment), 453
- ventilator, Emerson postoperative, hyperthermia while using (clinical workshop), 1106
- ventilator, mechanical, new (clinical workshop), 952
- ventilators, bailing device for removal of condensate from breathing tubes (clinical workshop), 951
- ventilators, effects of constant chest compression on performance [Amaha & others], 498
- ventilators, functional characteristics of [Saklad & Wickliff], 716
- vials, multi-dose, drug contamination in (abstract), 268
- Arrhythmia: see also heart
- anti-arrhythmic agent (dehydrobenzperidol) [Long & others], 318
- fecal, during caudal block with prilocaine (current comment), 222
- idionodal rhythm, treatment with minimal bicarbonate (current comment), 226
- A.S.A. Workshop on Teaching (report of meeting), 1112
- Association of University Anesthetists (report of meeting), 955
- Atelectasis: see lungs
- Atropine
- effect on respiration and gas exchange [Smith & others], 883
- AUSTIN, W. H., and VILLANDRY, P. J., Methoxyflurane and renal function (correspondence), 637
- BABAD, A. A., see SAIDMAN, L. J., jt. auth.
- BACHMAN, L., see LONG, G., jt. auth.
- BAILEY, R. J., see TORDA, T. A. G., jt. auth.
- BAUER, R. O., see WINTERS, W. D., jt. auth.
- BEHAR, M. G., see FORBES, A. M., jt. auth.
- BENDIXEN, H. H., Anesthesia for thoracic surgery (editorial), 649
- , see SUWA, K., jt. auth.
- BENNETT, A. E., How "Indian arrow poison" curare became a useful drug (history), 446
- BERGMAN, N. A., Components of the alveolar-arterial oxygen tension difference in anesthetized man, 517
- , Effects of varying respiratory waveforms on gas exchange, 390
- , see GERBERSHAGEN, H. U., jt. auth.
- BERRY, F. A., and EASTWOOD, D. W., Serious defects in "simple" equipment (current comment), 471
- BETTS, H. B., see KHALILI, A. A., jt. auth.
- Bicarbonate, sodium, see sodium bicarbonate
- BLINKS, J. R., On the measurement of myocardial contractility (editorial), 800
- Blood
- arterial, levels of methoxyflurane in [Wolfson & others], 1003
 - circulation, augmentation of artificial during cardiopulmonary resuscitation [Harris & others], 730
 - effects of experimental hypercitemia on [Corbascio & Smith], 510
 - gas exchange: see also Gases; specific gases
 - gas exchange, arterial blood oxygen during thoracotomy using nitrous oxide-oxygen [Boutros & Weisel], 705
 - gas exchange, carbon dioxide dissociation curves of true plasma [Roos & Thomas], 1048
 - gas exchange, effect of changes in maternal pH and P_{CO_2} on the P_o_2 of fetal lambs [Motoyama & others], 891
 - gas exchange, effect of expiratory resistance on blood gas tensions in anesthetized patients [Cheney & others], 670
 - gas exchange, effect of nitrous oxide uptake on arterial oxygenation [Heller & others], 904
 - glucose, effect of cyclopropane anesthesia on in man [Cervenko & Greene], 914
 - glucose, pyruvate, lactate, and metabolites of the tricarboxylic acid cycle, effects of ether and halothane on [Schweizer & others], 814
 - hemodynamic effects of changes in arterial carbon dioxide tension during positive pressure ventilation [Morgan & others], 866
 - hydrocarbon anesthetics in, determination by gas chromatography [Butler & others], 760
 - loss, effect of changes in blood volume on body impedance [Underwood & others], 426
 - oxygen content measured by O_2 electrode (clinical workshop), 773
 - plasma, in-vitro and in-vivo carbon dioxide dissociation curves of [Roos & Thomas], 1048
 - plasma cholinesterase, study of family with atypical and "silent" genes for (clinical workshop), 1085
 - pressure determination, human, Korotkoff sounds in (abstract), 274
 - transfusion, metabolic effects (correspondence), 1110
 - volume changes in, effect on body impedance [Underwood & others], 426
 - whole, measurement of inhalation anesthetics in by gas chromatography [Yokota & others], 1064

- BLUM, L. L., A mechanical aid for positioning psychiatric patients for spinal and epidural anesthesia (current comment), 464
- BOLGLA, J. H., Resuscitation of the newborn infant (correspondence), 789
- BONICA, J. J., Perspectives (editorial), 4
—, see FREUND, F. G., jt. auth.
- Book Reviews
283, 643
- BOUTROS, A. R., and WEISEL, M. R., Arterial blood oxygenation during thoracotomy using 70 per cent nitrous oxide in oxygen, 705
- BOWERS, D. L., see MUNSON, E. S., jt. auth.
- Brain
brain stem mechanisms of sleep [Zanchetti], 81
cerebral anesthetic equilibration rate, effects of hyperventilation on [Munson & Bowers], 377
cerebral anoxia, induced hypothermia following [Strong & Keats], 920
chemical transmission and cortical arousal [Krnjevic], 100
cortical units, effects of anesthetics on [Robson], 144
electroencephalogram as monitor of arterial blood levels of methoxyflurane [Wolfson & others], 1003
electroencephalography as monitor of blood levels of methoxyflurane (abstract), 275
thiopental: effects on subcortical mechanisms in temporal lobe epilepsy [Brazier], 192
tumor, hyperventilation in craniotomy for [Schettini & others], 363
- BRAND, L., see MARK, L. C., jt. auth.
- BRAZIER, M. A. B., Thiopental: effects on subcortical mechanism in temporal lobe epilepsy, 192
- BREWER, H. W., see COHEN, E. N., jt. auth.
- BROMAGE, P. R., Physiology and pharmacology of epidural analgesia (review), 592
- BRUNER, J. M. R., Hazards of electrical apparatus (review), 396
- BUDRIS, A. V., LIPPmann, M., and LORHAN, P. H., Tracheosophageal cleft (clinical workshop), 633
- BUNKER, J. P., Metabolic effects of blood transfusion: acid-base balance (correspondence), 1110
- Burns
severe, early treatment of (conference) (report of meeting), 472
succinylcholine, danger of in treatment (current comment), 467
succinylcholine, in treatment of (correspondence), 234
- BUTLER, R. A., KELLY, A. B., and ZAPP, J., The determination of hydrocarbon anesthetics in blood by gas chromatography (lab. methods), 760
- Bypass, cardiopulmonary: see cardiopulmonary bypass
- Calcium
cyclopropane and, effect on Purkinje fibers [Temte & others], 354
- hypocalcemia, experimental, caused by hypercitremia [Corbascio & Smith], 510
- Carbon dioxide
absorption of, influence of canister design on performance characteristics of commercial absorbers (abstract), 255
dissociation curves in-vitro and in-vivo of true plasma [Roos & Thomas], 1048
- hypercapnia, phrenic nerve activity in [Garcia & Cherniack], 1029
- hypercapnia, role in asphyxial death [Kristoffersen & others], 488
- narcotic properties of in the dog [Eisele & others], 856
- respiratory effects in the cat [Raymond & Standaert], 974
- response, bedside measurement of (clinical workshop), 624
- tension, arterial, hemodynamic effects of changes during positive pressure ventilation [Morgan & others], 866
- Cardiac: see Heart
- Cardiopulmonary bypass, effect of vasodilation during [Glushien & Harris], 985
- Cardiovascular disease
stress of anesthesia and surgery to patients with (abstract), 267
- Cardiovascular system: see Blood, Heart, Veins
- CARTER, S. H., see FINCH, J. S., jt. auth.
- Catecholamines
effect of cyclopropane on biotransformation [Gardier & others], 677
- Cells
functional organization of the spinal cord [Eccles], 31
mechanisms of in general anesthesia [Wall], 46
- morphology, fine structure of cell contact and the synapse [Kelly], 6
- Central nervous system: see Nervous system; Neurophysiology
- CERVENKO, F. W., and GREENE, N. M., Effect of cyclopropane anesthesia on glucose assimilation coefficient of man, 914
- CHALAZONITIS, N., Selective actions of volatile anesthetics on synaptic transmission and autorhythmicity in single identifiable neurons, 111
- CHENEY, F. W., HORNBEIN, T. F., and CRAWFORD, E. W., The effect of expiratory resistance on the blood gas tensions of anesthetized patients, 670
- CHERNIAK, N. S., see GARCIA, A., jt. auth.
- Chest
compression, constant, effects on performance of ventilators [Amaha & others], 498
- Children: see also Pediatrics, Infants
neuromuscular blockade by *d*-tubocurarine in [Long & Bachman], 723
- CHODOFF, P., and HELRICH, M., Factors affecting pediatric endotracheal tube size: A statistical analysis (clinical workshop), 779

- Cholinergic blocking agents
 muscarinic, central and peripheral effects [Domino & Corsen], 568
- Cholinesterase, plasma
 study of family with atypical and "silent" genes for (clinical workshop), 1085
- Chromatography: see Gas chromatography
- CHURCHILL-DAVIDSON, H. C., WAY, W. L., and DE JONG, R. H., The muscle relaxants and renal excretion, 540
- CI-581: see 2-orthochlorophenyl, 2-methylamino cyclohexanone HCl.
- CICCARELLI, H. E., see SIKER, E. S., jt. auth.
- , see WOLFSON, B., jt. auth.
- Circulation: see Blood, circulation
- Circulatory transport, regulation, and exchange, the physical bases of (report of meeting), 280
- Citrate, serum hemodynamic effects of experimental hypercitremia [Corbascio & Smith], 510
- Clinical Workshop (editorial) [Hershey], 973
- COHEN, E. N., Metabolism of halothane (editorial), 651
- , BREWER, H. W., and SMITH, D., The metabolism and elimination of *d*-tubocurarine, 309
- COLGAN, F. J., and WHANG, T. B., A method for measuring the functional residual capacity and dynamic lung compliance during oxygen and halothane inhalation, 559
- COLLETT, J. M., see GIESECKE, A. H., jt. auth.
- COLLINS, V. J., Preamble (to Ralph M. Waters Award Lecture), 201
- COLLITON, R. J., see MARTIN, S. J., jt. auth.
- Columbia University College of Physicians and Surgeons
 history of department of anesthesiology [Mark & others], 296
 Jubilee (editorial) [Vandam], 295
- Conference on Neurophysiology in Relation to Anesthesia (editorial)
 Foreword (Fink), 1
 discussants, 200
 Perspectives (Bonica), 4
 Preface (Eccles), 2
- Consent, patient (correspondence), 1109
- Convulsions
 induction of by steroid hormones [Heuser], 173
- COOK, A. W., see SCHETTINI, A., jt. auth.
- COOK, C. D., see MOTOMYAMA, E. K., jt. auth.
- COOPERMAN, L. H., ENGELMAN, K., and MANN, P. E. G., Anesthetic management of pheochromocytoma employing halothane and beta-adrenergic blockade. A report of 14 cases, 575
- CORBASCO, A. N., and SMITH, N. T., Hemodynamic effects of experimental hypercitremia, 510
- CORSSEN, G., see DOMINO, E. F., jt. auth.
- Craniotomy
 for brain tumor, hyperventilation in [Schettini & others], 363
- CRAWFORD, E. W., see CHENEY, F. W., jt. auth.
- , see MORGAN, B. C., jt. auth.
- CRAYTHORNE, B., New York Heart Association Symposium on the Contractile Process (report of meeting), 639
- Cricothyrotomy
 and special cannula for (clinical workshop), 943
- CROUT, J. R., see GIESECKE, A. H., jt. auth.
- CRUL, J. F., Succinylcholine neuromuscular block (correspondence), 791
- Cryofibrinogenemia, stellate ganglion block in (clinical workshop), 628
- Curare
 how it became a useful drug [Bennett], 446
- Cyclopropane
 calcium and, effect on Purkinje fibers [Temte & others], 354
 effect on blood glucose in man [Cervenko & Greene], 914
 effect on catecholamine biotransformation [Gardier & others], 677
 effect on glucose assimilation in man (abstract), 242
 effect on motor nerve activity, 124
 effect on renal function in normal man [Deutsch & others], 547
 epinephrine and, effect on sodium transport [Anderson], 438
 ganglionic blocking potency [Price & Price], 349
 intragastric, a potential explosion hazard (clinical workshop), 771
 minimum alveolar concentration [Saidman & others], 994
 non-adrenergic vasoconstriction produced by (abstract), 242
- DANIEL, S. S., and MORISHIMA, H. O., The estimation of mepivacaine hydrochloride in biological fluids (lab. methods), 924
- DAVIS, J. H., see MODELL, J. H., jt. auth.
- DAVIS, L. D., see TEMTE, J. V., jt. auth.
- Deadspace: see Respiration
- Death, asphyxial
 roles of acute anoxia, hypercarbia and acidosis [Kristoffersen & others], 488
- Decamethonium
 succinylcholine and, neuromuscular block in man [de Jong & Freund], 583
- DEFALQUE, R. J., Epidural block (comment), 786
—, Exaggerated spread of epidural block (current comment), 229
- Dehydrobenzperidol
 anti-arrhythmic action of [Long & others], 318
- DE JONG, R. H., and FREUND, F. G., Characteristics of the neuromuscular block with succinylcholine and decamethonium in man, 583
- , HERSHY, W. N., and WAGMAN, I. H., Measurement of a spinal reflex response (H-reflex) during general anesthesia in man. Association between reflex depression and muscular relaxation, 382
- , and NACE, R. A., Nerve impulse conduction and cutaneous receptor responses during general anesthesia, 851

- , see CHURCHILL-DAVIDSON, H. C., jt. auth.
 —, see WAGMAN, I. H., jt. auth.
 DE KORNFELD, T. J., see KIRCH, T. J., jt. auth.
 DEUTSCH, S., PIERCE, E. C., JR., and VANDAM, L. D., Cyclopropane effects on renal function in normal man, 547
 Dibucaine reversible depression of hippocampus by long-term injection in monkeys (abstract), 258
 Diethyl ether differential effects on right and left myocardial function [Shimosato & others], 874
 effects on blood during operation [Schweizer & others], 814
 effects on ventilation in dogs with or without nerve block (abstract), 264
 methoxyflurane and, comparative effects of in man (abstract), 259
 pulmonary surfactant in lung extracts of patients receiving (clinical workshop), 1089
 Digitalis intoxication effect of lidocaine on (abstract), 272
 DILLON, J. B., see WALTS, L. F., jt. auth.
 Divinyl ether pulmonary exchange in man [Salanitre & others], 535
 DOMINO, E. F., Effects of preanesthetic and anesthetic drugs on visually evoked responses, 184
 —, and CORSEN, G., Central and peripheral effects of muscarinic cholinergic blocking agents in man, 568
 DRIPPS, R. D., Patient consent (correspondence), 1109
 —, see LONG, G., jt. auth.
 DUNBAR, B. S., OVASSAPIAN, A., and SMITH, T. C., The effects of methoxyflurane on ventilation in man, 1020
 DURELL, R., see LIVINGSTON, M., jt. auth.
 DYKES, M. H. M., Prolonged anesthesia, overcurarization, and resection of the abdominal wall (current comment), 231
- Ear**
 middle, effect of nitrous oxide on [Waun & others], 848
 middle, pressure, effect of nitrous oxide on (clinical workshop), 948
 Early Treatment of Severe Burns (conference) (meeting report), 472
 EASTWOOD, D. W., see BERRY, F. A., jt. auth.
 ECCLES, J. C., Functional organization of the spinal cord, 31
 —, Preface (editorial), 2
 EDELIST, G., and ORKIN, L. R., Evaluation of a rebreathing tube for preventing atelectasis (current comment), 211
 —, and ZAUDER, H. L., Bedside measurement of carbon dioxide responses (clinical workshop), 624
 Edrophonium neuromuscular effects in man [Katz], 327
 EGER, E. I., II, see EISELE, J. H., jt. auth.
- , see REGAN, M. J., jt. auth.
 —, see SAIDMAN, L. J., jt. auth.
 EGGRS, C. W. N., JR., METZGAR, M. T., and PLUMLEE, J. E., Axillary block and sedation for cardiac catheterization (clinical workshop), 936
 EISELE, J. H., EGER, E. I., II, and MUALLEM, M., Narcotic properties of carbon dioxide in the dog, 856
 Electrical apparatus, see Apparatus and equipment
 Electroencephalogram as monitor of arterial blood levels of methoxyflurane [Wolfson & others], 1003
 Electroencephalography: see Brain
 Electromyography: see Muscle
 Electrosleep and Electroanesthesia, First International Symposium (report of meeting), 638
 EL ETR, A. A., Relief of arterial spasm by epidural block in a sympathectomized patient (clinical workshop), 1107
 —, see SALEM, M. R., jt. auth.
 Embolism, air pathological physiology of (abstract), 240
 ENDAHL, G. L., see GARDIER, R. W., jt. auth.
 Endotracheal tube; see Apparatus and equipment
 ENGEL, H. L., Time constants in Anesthesiology (correspondence), 636
 ENGELMAN, K., see COOPERMAN, L. H., jt. auth.
 Epidural analgesia, physiology and pharmacology of [Bromage], 592
 Epidural block (comment), 786
 exaggerated spread of (current comment), 229
 Epilepsy effects of thiopental on temporal lobe epilepsy [Brazier], 192
 Epinephrine augmentation of artificial circulation during cardiopulmonary resuscitation [Harris & others], 730
 cyclopropane and, synergistic effect on sodium transport [Anderson], 438
 effect of cyclopropane on biotransformation [Dardier & others], 677
 urinary, during Innovar-nitrous oxide anesthesia [Giesecke & others], 701
 Equipment: see Apparatus and equipment
 ERNST, E. A., Construction of a human spinal canal model (clinical workshop), 939
 —, and SMITH, J. C., A pharmacogenetic study of a family exhibiting atypical and "silent" genes for plasma cholinesterase, 1085
 Esophagus rupture, following insertion of nasogastric tube (clinical workshop), 782
 Ether see Diethyl ether; Divinyl ether
 minimum alveolar concentration [Saidman & others], 994
 ETSTEN, B. E., see SHIMOSATO, S., jt. auth.
 EUBANKS, D., see SAKLAD, M., jt. auth.

Eye

fundoscopic, ophthalmodynamometric, and tonometric observations during anesthesia and cardiopulmonary bypass in man (abstract), 247

FAIRLEY, M. B., see SELLERY, G. R., jt. auth.

FEINBERG, G. L., and RAVIN, M. D., Multiple general anesthetics, gastroesophageal reflux and spontaneous esophageal rupture (clinical workshop), 782

Fetal-maternal relations

effect of changes in maternal pH and P_{CO_2} on the P_{CO_2} of fetal lambs [Motoyama & others], 891

maternal hyperventilation during labor (editorial) [James], 805

passage of lidocaine across placenta (abstract), 246

placental clearance of mepivacaine following administration to guinea-pig fetus [Morishima & Adamson], 343

FINCH, J. S., and CARTER, S. H., Isolated neurologic deficit following spinal anesthesia (clinical workshop), 785

FINK, B. R., An American anesthesiologist in Moscow, 764

—, Conference on Neurophysiology in Relation to Anesthesiology, Foreword (editorial), 1

—, Patient consent (correspondence), 1109

—, Time constants in Anesthesiology (correspondence), 637

First aid

evaluation of Elder Demand Valve Resuscitator in (clinical workshop), 623

First International Symposium on Electrosleep and Electroanesthesia (report of meeting), 638

FOLDES, F. F., see TORDA, T. A. G., jt. auth.

FORBES, A. M., BEHAR, M. G., and SMITH, T. C., Analysis of oxygen, carbon dioxide and nitrous oxide mixtures with the Scholander apparatus (lab. methods), 928

FORBES, J., see REIDER, K., jt. auth.

FREUND, F. G., BONICA, J. J., WARD, R. J., AKAMATSU, T. J., and KENNEDY, W. F., JR., Ventilatory reserve and level of motor block during high spinal and epidural anesthesia, 834

—, see DE JONG, R. H., jt. auth.

Gallamine

use in renal failure [Churchill-Davidson & others], 540

GALLOZZI, E., An unusual cause of laryngeal obstruction (clinical workshop), 784

GAMBLE, C., see SHIMOSATO, S., jt. auth.

Ganglionic blocking potencies of anesthetics [Price & Price], 349

GARCIA, A., and CHERNIACK, N. S., Integrated phrenic activity in hypercapnia and hypoxia, 1029

GARDIER, R. W., ENDAHL, G. L., and HAMELBERG, W., Cyclopropane: Effect on catecholamine biotransformation, 677

GARRISON, F. W., see SWEENEY, D. F., jt. auth.

Gas chromatography

determination of hydrocarbon anesthetics in blood by [Butler & others], 760

determination of mepivacaine in blood [Pratt & others], 432

direct injection method for measurement of inhalation anesthetics in whole blood and tissues [Yokota & others], 1064

Gas exchange

see also blood gas exchange effect of preanesthetic drugs on in man [Smith & others], 883

effects of varying respiratory wave forms on [Bergman], 390

Gas mixtures

analysis of gases in with Scholander apparatus [Forbes & others], 928

Gases

see also specific gases

anesthetic, in brain, effects of hyperventilation on cerebral anesthetic equilibration [Munson & Bowers], 377

blood, influence of tidal exchange during IPPB on, in anesthetized humans (abstract), 254

effect of expiratory resistance on blood gas tensions [Cheney & others], 670

hydrocarbon, effects of prolonged inhalation on rats (abstract), 238

GERACI, R. P., Continuous stellate ganglion block (clinical workshop), 632

CERBERSHAGEN, H. U., and BERGMAN, N. A., The effect of *d*-tubocurarine on respiratory resistance in anesthetized man, 981

GERECKE, W. B., A simplified, trouble-free transducer holder (current comment), 213

GIAMMONA, S. T., see MODELL, J. H., jt. auth.

GIESEKKE, A. H., JENKINS, M. T., CROUT, J. R., and COLLETT, J. M., Urinary epinephrine and norepinephrine during Innovar-nitrous oxide anesthesia in man, 701

GISSEN, A. J., KARIS, J. H., and KATZ, R. L., Succinylcholine neuromuscular block (correspondence), 791

—, see KARIS, J. H., jt. auth.

—, see KATZ, R. L., jt. auth.

Glucose, blood: see Blood glucose

GLUSHIEN, T. M., and HARRIS, L. C., Jr., The effect of vasodilatation on metabolic and hemodynamic parameters during and after cardiopulmonary bypass, 985

GOLD, M. I., A convenient and accurate nebulizer (clinical workshop), 1102

GOLDBERG, A. H., and ULLRICK, W. C., Effects of halothane on isometric contractions of isolated heart muscle, 838

GOTTLIEB, S. F., and SAVRAN, S. V., Nitrous oxide inhibition of sodium transport, 324

GOWING, D., see UNDERWOOD, R. J., jt. auth.

GRAY, G. H., JR., see WOLFSON, B., jt. auth.

GREENE, N. M., Toxic effects of anesthetics, symposium on (report of meeting), 956

—, see CERVENKO, F. W., jt. auth.

- GREGO, J., see PRATT, E. L., jt. auth.
- GUNTHEROTH, W. G., see MORGAN, B. C., jt. auth.
- Halothane**
- effect of carbon dioxide on in the dog [Eisele & others], 856
 - anesthesia, glucose pool size, turnover rate, and C^14O_2 production during (abstract), 251
 - beta-adrenergic blockade and, in management of pheochromocytoma [Cooperman & others], 575
 - biotransformation in man [Rehder & others], 711
 - effect of subanesthetic concentration on pain threshold [Siker & others], 337
 - effects on blood during operation [Schweizer & others], 814
 - effect on canine oxygen consumption [Theye & Sessler], 661
 - effects on isometric contractions of isolated heart muscle [Goldberg & Ullrick], 838
 - effects on mechanical properties of heart muscle (abstract), 255
 - effects on neuromuscular transmission (abstract), 252
 - effects on oxygen consumption and glucose metabolism in rats (abstract), 262
 - ganglionic blocking potency and interaction with nitrous oxide [Price & Price], 349
 - metabolism of (editorial) [Cohen], 651
 - minimum alveolar concentration [Saidman & others], 994
 - myocardial and total oxygen consumption with [Theye], 1042
 - neuromuscular effects and interaction with *d*-tubocurarine in man [Katz & Gissen], 564
 - non-adrenergic vasoconstriction produced by (abstract), 242
 - oxygen and, method for measuring functional residual capacity and dynamic lung compliance during inhalation [Colgan & Whang], 559
 - pulmonary surfactant in lung extracts of patients receiving (clinical workshop), 1089
 - HAMELBERG, W., see CARDIER, R. W., jt. auth.
 - HAMILTON, W. K., see WAUN, J. E., jt. auth.
 - HAMLOW, E. E., and PECK, G. E., The stability of solutions of acetylcysteine to oxidation during nebulization (tech. note), 934
 - HARMEL, M. H., see AMAHA, K., jt. auth.
 - HARRIS, L. C., JR., KIRIMLI, B., and SAFAR, P., Augmentation of artificial circulation during cardiopulmonary resuscitation, 730
 - , KIRIMLI, B., and SAFAR, P., Ventilation—cardiac compression rates and ratios in cardiopulmonary resuscitation, 806
 - , see GLUSHIEN, T. M., jt. auth.
 - Hearing acuity**
 - effect of nitrous oxide on [Waun & others], 846 - Heart**
 - arrhythmia, potency of anti-arrhythmic drugs [Long & others], 318
 - cardiac catheterization, axillary block and sedation for (clinical workshop), 936
 - cardiac pacemakers (correspondence), 790
 - cardiopulmonary resuscitation, augmentation of artificial circulation during [Harris & others], 730
 - differential effects of diethyl ether anesthesia on right and left myocardial function [Shimosato & others], 874
 - hemodynamic effects of changes in arterial carbon dioxide tension during intermittent positive pressure ventilation [Morgan & others], 866
 - hemodynamic effects, acute, of methoxyamine in man [Smith & Whitcher], 735
 - muscle, isolated, effects of halothane on isometric contractions of [Goldberg & Ullrick], 838
 - myocardial contractility, on the measurement of (editorial) [Blinks], 800
 - myocardial and total oxygen consumption with halothane [Theye], 1042
 - Purkinje fibers, effects of calcium and cyclopropane on [Tentle & others], 354
 - ventilation—cardiac compression rates and ratios in cardiopulmonary resuscitation [Harris & others], 806

HELLER, M. L., WATSON, T. R., JR., and IMREDY, D. S., Effect of nitrous oxide uptake on arterial oxygenation, 904

HELMER, P. R., see TEMTE, J. V., jt. auth.

HELRICH, M., see CHODOFF, P., jt. auth.

Hemorrhage

 - following induced hypotension, management of (clinical workshop), 1104

HERSHEY, S. G., Circulatory Transport (report of meeting), 280

—, Clinical Workshop (editorial), 973

HERSHEY, W. N., see DE JONG, R. H., jt. auth.

HESSLER, O., see REHDER, K., jt. auth.

HEUSER, G., Induction of anesthesia, seizures and sleep by steroid hormones, 173

Hexafluoroenium bromide, role in interactions of neuromuscular blocking agents in man [Torda & others], 1010

Hiccups during anesthesia, treatment (current comment), 463

History of Anesthesiology

 - anesthesiology in 1967 [Mark & others], 296
 - College of Physicians and Surgeons Jubilee (editorial), 295
 - curare, how it became a useful drug [Bennett], 446

HITOMI, Y., see YOKOTA, T., jt. auth.

HOLADAY, D. A., see KRISTOFFERSEN, M. B., jt. auth.

—, see MATZ, G. J., jt. auth.

HOLL, J. W., and SHNIDER, S. M., Methoxyflurane concentrations from the Cyprane Inhaler (clinical workshop), 770

HOLT, M. H., Central venous pressures via peripheral veins (clinical workshop), 1093

Hormones, steroid

 - induction of anesthesia, seizures and sleep by [Heuser], 173

- HORNBLEN, T. F., see CHENEY, F. W., jt. auth.
 —, see MORGAN, B. C., jt. auth.
 HOWLAND, W. S., see SCHWEIZER, O., jt. auth.
 Hyaline membrane disease
 management with new mechanical ventilator (abstract), 237
 Hypercapnia: see Carbon dioxide
 Hypercarbia: see Carbon dioxide
 Hypocapnia
 experimental, hemodynamic effects of [Corbascio & Smith], 510
 Hyperthermia
 while using ventilator (clinical workshop), 1106
 Hyperventilation
 see also Respiration
 in craniotomy for brain tumor [Schettini & others], 363
 effects on cerebral anesthetic equilibration [Munson & Bowers], 377
 Hypocalcemia: see Calcium
 Hypotension
 induced, management of hemorrhage following (clinical workshop), 1104
 postoperative idionodal, treated with minimal bicarbonate (current comment), 226
 with spinal anesthesia, physiologic treatment of (abstract), 276
 Hypothermia
 effect in dogs on anesthetizing and apneic doses of inhalation agents [Regan & Eger], 689
 induced, following cerebral anoxia [Strong & Keats], 920
 respiratory threshold in (abstract), 263
 Hypoventilation: see Respiration
 Hypoxia: see Oxygen
- IMPARATO, A. M., REPPERT, E. H., SPIELBERGER, L., and MAZZIA, V. D. B., Cardiac pacemakers (correspondence), 790
 IMREDDY, D. S., see HELLER, M. L., jt. auth.
 Index, anesthetic: see Anesthesia, anesthetic index
 Infants: see also Children
 newborn, resuscitation of (correspondence), 789
 newborn, pneumothorax, spontaneous, in (clinical workshop), 629
 tracheoesophageal cleft (clinical workshop), 633
 Infusion therapy, crystalloid, in intraoperative support of blood volume (abstract), 239
 Injection, epidural
 study of dural penetration following, and influence of epinephrine (abstract), 261
 Innovar
 clinical studies with (current comments), 458
 nitrous oxide and, respiratory effects in man (abstract), 245
 nitrous oxide and, urinary epinephrine and nor-epinephrine during anesthesia with [Giesecke & others], 701
 Inspiration: see respiration
 Intrathecal block: see nerve block
 Intravenous regional anesthesia, symposium on (report of meeting), 279
 Intubation, nasotracheal
 possible relation of laryngeal band to (current comment), 466
 JACOBS, A. G., An anesthetic machine for small mammals (current comment), 217
 JACOBS, R. G., and KING, H. K., A positioning guide for intrathecal blocks (clinical workshop), 627
 JAMES, L. S., Maternal hyperventilation during labor (editorial), 804
 JAMES, O. C., and MARX, G. F., Spontaneous bilateral pneumothorax in a newborn infant (clinical workshop), 629
 JENKINS, M. T., see GIESECKE, A. H., jt. auth.
 JOHNSTON, G. I., see UNDERWOOD, R. J., jt. auth.
 JONES, L., see WOLFSON, B., jt. auth.
 JOYCE, T. H., see TOLMIE, J. D., jt. auth.
 KARIS, J. H., GISSEN, A. J., and NASTUK, W. L., The effect of volatile anesthetic agents on neuromuscular transmission, 128
 —, see Gissen, A. J., jt. auth.
 KATZ, J., Stellate ganglion block in a patient with cryofibrinogenemia (clinical workshop), 628
 KATZ, R. L., Neuromuscular effects of *d*-tubocurarine, edrophonium and neostigmine in man, 327
 —, Pyridostigmin (mestinon) as an antagonist of *d*-tubocurarine, 528
 —, Symposium on Intravenous Regional Anesthesia (report of meeting) 280
 —, and Gissen, A. J., Neuromuscular and electromyographic effects of halothane and its interaction with *d*-tubocurarine in man, 564
 —, see Gissen, A. J., jt. auth.
 KATZUNG, B. G., see MILLER, R. D., jt. auth.
 KEATS, A. S., see STRONG, M. J., jt. auth.
 KELLY, A. B., see BUTLER, R. A., jt. auth.
 KELLY, D. E., Fine structure of cell contact and the synapse, 6
 KELMAN, G. R., and PRYS-ROBERTS, C., A modified cuvette densitometer (clinical workshop), 1101
 KENNEDY, W. F., JR., see FREUND, F. G., jt. auth.
 —, see PARKS, C. R., jt. auth.
 KHALIL, A. A., and BETTS, H. B., Isolated block of musculocutaneous and perineal nerves in the management of spasticity with special reference to use of a nerve stimulator (current comment), 219
 Kidney
 muscle relaxants and renal excretion [Churchill-Davidson & others], 540
 renal failure, *d*-tubocurarine and gallamine in [Churchill-Davidson & others], 540
 renal function, effects of cyclopropane on in normal man [Deutsch & others], 547
 renal function, methoxyflurane and (correspondence), 637
 KING, H. K., see JACOBS, R. G., jt. auth.
 KIRCH, T. J., and DE KORNFIELD, T. J., An unexpected complication (hyperthermia) while using the Emerson postoperative ventilator (clinical workshop), 1106

- KIRIMLI, B., see HARRIS, L. C., jt. auth. (2)
- KITZ, R. J., see MARK, L. C., jt. auth.
- , see NEMAZIE, A. S., jt. auth.
- KLONYKUS, D. H., see TORDA, T. A. G., jt. auth.
- KOSAKA, F., see YOKOTA, T., jt. auth.
- KRISTOFFERSEN, M. B., RATTENBORG, C. C., and HOLADAY, D. A., Asphyxial death: The roles of acute anoxia, hypercarbia and acidosis, 488
- KRNJEVIĆ, K., Chemical transmission and cortical arousal, 100
- KUWABARA, S., see TORDA, T. A. G., jt. auth.
- LAFARGUE, R. T., see VIRTUE, R. W., jt. auth.
- Larynx**
- ericothyroid membrane puncture with special cannula (clinical workshop), 943
 - laryngeal band: possible relation to prolonged nasotracheal intubation (current comment), 466
 - obstruction by Holy Communion wafer (clinical workshop), 784
- LEFEMINE, A. A., Cardiac pacemakers (correspondence), 790
- Lidocaine
- effects on central nervous system [Wagman], 155
 - effects on digitalis intoxication (abstract), 272
 - passage across placenta (abstract), 246
- LIM, R. K. S., Pain mechanisms, 106
- LIPPmann, M., see BUDRIS, A. V., jt. auth.
- Literature briefs
- 287, 475, 646, 792, 958, 1115
- LITTLE, D. M., Ralph Moore Tovell (obituary), 307
- LIU, P., see AMAHA, K., jt. auth.
- LIVINGSTON, M., and DURELLI, R., Epiglottic elevator (current comment), 214
- LONG, G., and BACHMAN, L., Neuromuscular blockade by *d*-tubocurarine in children, 723
- , DRIPPS, R. D., and PRICE, H. L., Measurement of anti-arrhythmic potency of drugs in man: effects of dihydronoradrenalin, 318
- LORHAN, P. H., see BUDRIS, A. V., jt. auth.
- LOWENSTEIN, E., Use of succinylcholine in burned patients (correspondence), 234
- Lungs
- see also Blood gas exchange
 - atelectasis, evaluation of rebreathing tube for preventing (current comment), 211
 - atelectasis, postoperative, relation to absence of nitrogen in patients with pulmonary disease (abstract), 269
 - cardiopulmonary resuscitation, ventilation-cardiac compression rates and ratios in [Harris & others], 806
 - chest compression, effects of on performance of ventilators [Amaha & others], 498
 - compliance, in human during prolonged positive pressure ventilation (abstract), 257
 - effect of chronic exposure to ultrasonic aerosols [Modell & others], 680
 - pulmonary function, effect of preanesthetic drugs on in man [Smith & others], 883
- alveolar-arterial oxygen tension difference in anesthetized man [Bergman], 517
- pulmonary gas exchange (divinyl ether) in man [Salanitro & others], 535
- pulmonary surfactant in lung extracts of patients receiving diethyl ether or halothane (clinical workshop), 1089
- MAC**
- see Anesthesia, anesthetic index
- MAGILL, I., The heritages of the past are the privileges of the future (Ralph M. Waters Award Lecture), 202
- MAHLER, D. L., Elementary statistics for the anesthesiologist (special article), 749
- MALIA, E. R., Self-powered atomizer (clinical workshop), 625
- MANN, P. E. G., see COOPERMAN, L. H., jt. auth.
- MAPLESON, W. W., and WATERS, D. J., Time constants in Anesthesiology (correspondence), 635
- MARCUS, P. S., Inspiratory force measurement (correspondence), 235
- MARK, L. C., KITZ, R. J., and BRAND, L., No mischievous witchcraft. Anesthesiology in 1967, bicentennial year of the College of Physicians and Surgeons, 296
- MARTIN, S. J., MURPHY, J. D., COLLITON, R. J., and ZEFFIRO, R. G., Clinical studies with Innovar (current comment), 458
- MARTIN, W. E., see MORGAN, B. C., jt. auth.
- MARX, G. F., Fetal arrhythmia during caudal block with prilocaine (current comment), 222
- , see JAMES, O. C., jt. auth.
- MATZ, G. J., RATTENBORG, C. G., and HOLADAY, D., Effects of nitrous oxide on middle ear pressure (clinical workshop), 948
- Mazzia, V. D. B., see IMPARATO, A. M., jt. auth.
- MCCHAUGHEY, T. J., Use of succinylcholine in burned patients (correspondence), 234
- Mepivacaine
- estimation of in biological fluids [Daniel & Morishima], 924
 - gas chromatographic determination in blood [Pratt & others], 432
 - placental clearance following administration to the guinea pig fetus [Morishima & Adams], 343
- Metabolic and Endocrine Disorders—Clinical Considerations (seminar) (report of meeting), 641
- METCALF, D. R., see VIRTUE, R. W., jt. auth.
- Methoxamine
- acute hemodynamic effects in man [Smith & Whitcher], 735
 - concentrations from the Cyprane inhaler (clinical workshop), 770
 - and diethyl ether, comparative effects in man (abstract), 259
 - effect of subanesthetic concentration on pain threshold [Siker & others], 337
 - effects on ventilation in man [Dunbar & others], 1020

- electroencephalogram as monitor of arterial blood levels (abstract), 275
 electroencephalogram as monitor of arterial blood levels [Wolfson & others], 1003
 minimum alveolar concentration [Saidman & others], 994
 and renal function (correspondence), 637
- METZCAR, M. T., see EGGERS, G. W. N., jt. auth.
- Micromethods in neuropharmacology: an approach to the study of anesthetics [Salmiraghi & Weight], 54
- Middle East Journal of Anaesthesiology (editorial) [Vandam], 486
- MILLER, R. D., WAY, W. L., and KATZUNG, B. G., The potentiation of neuromuscular blocking agents by quinidine, 1036
- MILLER, R. N., and THOMAS, P. A., Pulmonary surfactant: determinations from lung extracts of patients receiving diethyl ether or halothane, 1089
- Minimum alveolar concentrations
 see also Anesthesia, anesthetic index
 of methoxyflurane, halothane, ether and cyclopropane in man [Saidman & others], 994
- MITCHELL, G. D., see TOLMIE, J. D., jt. auth.
- MODELL, J. H., GIAMMONA, S. T., and DAVIS, J. H., Effect of chronic exposure to ultrasonic aerosols on the lung, 680
- Monoamine oxidase inhibition, effects on actions of meperidine and norepinephrine (abstract), 261
- MORGAN, B. C., CRAWFORD, E. W., HORNEBEIN, T. F., MARTIN, W. E., and GUNTHROTH, W. G., Hemodynamic effects of changes in arterial carbon dioxide tension during intermittent positive pressure breathing, 866
- MORI, K., see WINTERS, W. D., jt. auth.
- MORI, M., see VIRTUE, R. W., jt. auth.
- MORISHIMA, H. O., and ADAMSONS, K., Placental clearance of mepivacaine following administration to the guinea pig fetus, 343
 —, see DANIEL, S. S., jt. auth.
- Morphine
 effect on respiration and gas exchange [Smith & others], 883
- Morphology
 cell, fine structure of cell contact and the synapse [Kelly], 6
 spinal cord, functional organization of [Eccles], 31
- Moscow, see U.S.S.R
- MOSTERT, J. W., and TRUDNOWSKI, R. J., Persistent postoperative idionodal hypotension treated with minimal bicarbonate (current comment), 226
- MOTOYAMA, E. K., RIVARD, G., ACHESON, F., and COOK, C. D., The effect of changes in maternal pH and P_{CO_2} on the P_{O_2} of fetal lambs, 891
- MUALLEM, M., see EISELE, J. H., jt. auth.
 —, see SAIDMAN, L. J., jt. auth.
- MUNSON, E. S., and BOWERS, D. L., Effects of hyperventilation on the rate of cerebral anesthetic equilibration, 377
 —, see SAIDMAN, L. H., jt. auth.
- MURPHY, J. D., see MARTIN, S. J., jt. auth.
- Muscarinic cholinergic blocking agents
 central and peripheral effects in man [Domino & Corssen], 568
- Muscle
 effects of volatile anesthetic agents on neuromuscular transmission [Karis & others], 128
 electromyographic effects of halothane [Katz & Gissen], 564
 heart, isolated, effects of halothane on isometric contractions of [Goldberg & Ullrick], 838
 myocardial contractility, measurement of (editorial) [Blinks], 800
 neuromuscular block, potentiation by quinidine [Miller & others], 1036
 neuromuscular block with succinylcholine (correspondence), 791
 neuromuscular block by *d*-tubocurarine in children [Long & Bachman], 723
 neuromuscular block by germin^d acetates (abstract), 249
 neuromuscular block with succinylcholine and decamethonium in man [de Jong & Freund], 583
 neuromuscular block, prolonged, causing overcurarization (current comment), 231
 neuromuscular block, technique for evaluation in man (current comment), 215
 neuromuscular blocking agents, role of hexafluoroenium in interactions of [Torda & others], 1010
 neuromuscular effects of *d*-tubocurarine, edrophonium and neostigmine in man [Katz], 327
 relaxants: see Neuromuscular blocking agents; specific compounds
 relaxants and renal excretion [Churchill-Davidson & others], 540
 relaxation during anesthesia, association with spinal reflex response in man [de Jong & others], 382
- NACE, R. A., see DE JONG, R. H., jt. auth.
- NAHAS, G. G., Acid-base balance (correspondence), 787
 —, Conference on Early Treatment of Severe Burns (meeting report), 472
- Narcotic agents
 see also specific agents
 psychologic factors influencing postoperative narcotic administration (abstract), 246
- Narcotic properties of carbon dioxide in the dog [Eisele & others], 856
- Nasogastric tube: see Apparatus and equipment
- NASTUK, W. L., see KARIS, J. H., jt. auth.
- Nebulization
 atomizer (clinical workshop), 625
 chronic, effect on lung [Modell & others], 680
 on acetylcysteine [Hamlow & Peck], 934
 of isoproterenol (clinical workshop), 1102

- NEMAZIE, A. S., and KITZ, R. J., A quantitative technique for the evaluation of peripheral neuromuscular blockade in man (current comment), 215
- Neostigmine**
neuromuscular effects in man [Katz], 327
- Nerve**
effects of anesthetics on cortical units [Robson], 144
effects of *d*-tubocurarine antagonized by pyridostigmine [Katz], 533
effects of inhalation anesthetics on motor nerve activity [Van Poznak], 124
effects of volatile anesthetics on neuromuscular transmission [Karis & others], 128
impulse conduction and cutaneous receptor responses during general anesthesia [de Jong & Nace], 851
neurologic deficit following spinal anesthesia (clinical workshop), 785
phrenic, activity in hypercapnia and hypoxia [Garcia & Cherniack], 1029
stimulator (current comment), 219
- Nerve block**
see also Muscle, neuromuscular block
adrenergic blockade and acute hemorrhage in splenectomized dogs (abstract), 277
assessment of in therapeutics [Papper], 1074
axillary, and sedation for cardiac catheterization (clinical workshop), 936
epidural (comment), 786
epidural, exaggerated spread of (current comment), 229
epidural, relief of arterial spasm in sympathectomized patient by (clinical workshop), 1107
ganglionic blocking potencies of anesthetics [Price & Price], 349
intrathecal, positioning guide for (clinical workshop), 627
motor, level during high spinal and epidural anesthesia [Freund & others], 834
musculocutaneous and perineal, in spasticity, nerve stimulator for (current comment), 219
myoneural, phase II, earliest evidence of (abstract), 250
neuromuscular blocking agents, role of hexafluorinem in interactions of [Torda & others], 1010
obturator, simplified approach (clinical workshop), 775
potentiation by quinidine [Miller & others], 1040
stellate ganglion, continuous (clinical workshop), 632
stellate ganglion, in cryofibrinogenemia (clinical workshop), 628
technique for evaluation in man (current comment), 215
- Nervous System**
effects of lidocaine on central nervous system [Wagman], 155
effects of muscarinic cholinergic blocking agents on central and peripheral nervous systems [Domino & Corssen], 568
- effects of steroid hormones on central nervous system [Heuser], 173
morphology, fine structure of cell contact and the synapse [Kelly], 6
morphology, functional organization of the spinal cord [Eccles], 31
physiology: see Neurophysiology
physiology and pharmacology of epidural analgesia [Bromage], 592
spinal reflex (H-reflex) during general anesthesia [de Jong & others], 382
- Neuroanatomy:** see Nervous system, morphology
- Neuroleptanalgesia**
clinical studies with Innovar (current comment), 458
- Neuromuscular block:** see Nerve block; Muscle, neuromuscular block; specific compounds and procedures
- Neuromuscular blocking agents:** see also specific agents; Nerve; Muscle
hexafluorinem in interactions of [Torda & others], 1010
quinidine potentiation of [Miller & others], 1036
- Neurophysiology**
anesthesia [Winters & others], 65
anesthesia, mechanisms of (editorial) [Wall], 799
anesthetics, volatile effects on neuromuscular transmission [Karis & others], 128
brain stem mechanisms of sleep [Zanchetti], 81
chemical transmission and cortical arousal [Krnjević], 100
Conference on, in Relation to Anesthesiology, 1-200
effects of anesthetics on cortical units [Robson], 144
effects of anesthetics on mammalian spinal cord [Somjen], 135
effects of preanesthetic and anesthetic drugs on visually evoked responses [Domino], 184
effects of volatile anesthetics on neurons [Chalazonitis], 111
nerve impulse conduction and cutaneous receptor responses during general anesthesia [de Jong & Nace], 851
pain mechanisms [Lim], 106
physiology and pharmacology of epidural analgesia [Bromage], 592
- New York Heart Association Symposium on the Contractile Process (report of meeting), 639
- Nitrous oxide**
effects on arterial oxygenation [Heller & others], 904
effects on middle ear mechanics and hearing acuity [Waun & others], 846
effects on middle ear pressure (clinical workshop), 948
ganglionic blocking potency and interaction with halothane [Price & Price], 349
growth-inhibiting effect on chick embryos (abstract), 268
inhibition of sodium transport [Gottlieb & Savran], 324

- Innovar and, urinary epinephrine and norepinephrine during anesthesia with [Giesecke & others], 701
- oxygen and, arterial blood oxygenation during thoracotomy using [Boutros & Weisel], 705
- Norepinephrine
urinary, during Innovar-nitrous oxide anesthesia [Giesecke & others], 701
- Obstetrics
see also fetal-maternal relations
fetal arrhythmia during caudal block with prilocaine (current comment), 222
- maternal hyperventilation during labor (editorial) [James], 804
- OHTA, K., see YOKOTA, T., jt. auth.
- Operations: see Surgery and specific surgical operations and procedures
- ORKIN, L. R., see EDELIST, C., jt. auth.
- 2-Orthochlorophenyl, 2-methylamino cyclohexane HCl (CI-581) [Virtue & others], 823
- OVASSAPIAN, A., see DUNBAR, B. S., jt. auth.
- OWRE, E. S., see SCHETTINI, A., jt. auth.
- Oxygen
anoxia, cerebral, induced hypothermia following [Strong & Keats], 920
anoxia, role in asphyxial death [Kristoffersen & others], 488
arterial blood oxygenation during thoracotomy using nitrous oxide-oxygen [Boutros & Weisel], 705
in blood, measurement of by O₂ electrode (clinical workshop), 773
consumption, effect of halothane on [Theye], 1042
consumption, effect of halothane on [Theye & Sessler], 661
hypoxia, phrenic nerve activity in [Garcia & Cherniack], 1029
tension, alveolar-arterial difference in anesthetized man [Bergman], 517
- Pacemaker, cardiac (correspondence), 790
- Pain
analgesia, physiology of epidural [Bromage], 592
mechanisms [Lim], 106
regional anesthesia, assessment of in treatment [Papper], 1074
threshold, effects of halothane and methoxyflurane on [Siker & others], 337
- PALIOTTA, J., see SAKLAD, M., jt. auth.
- PAPPER, E. M., A matter of definition (editorial), 969
—, Regional anesthesia. A critical assessment of its place in therapeutics (E. A. Rovenstine Memorial Lecture), 1074
- PARKS, C. R., and KENNEDY, W. F., Jr., Obturator nerve block: A simplified approach (clinical workshop), 775
- PEARSON, J. W., and REDDING, J. S., Evaluation of the Elder Demand Valve Resuscitator for use by first-aid personnel, 623
- PECK, G. E., see HAMLOW, E. E., jt. auth.
- Pediatrics: see also Children, Infants
axillary block and sedation for cardiac catheterization (clinical workshop), 936
pediatric endotracheal tube, factors affecting size (clinical workshop), 779
- PENNINCKX, J., see SAFAR, P., jt. auth.
- Pheochromocytoma
halothane and beta-adrenergic blockade in management of [Cooperman & others], 575
- PIERCE, E. C., Jr., see DEUTSCH, S., jt. auth.
- Plasma: see Blood
- PLUMLEE, J. E., see EGGRERS, C. W. N., jt. auth.
- Pneumothorax
spontaneous bilateral in newborn (clinical workshop), 629
- PRATT, E. L., WARRINGTON, H. P., and GREGO, J., The gas chromatographic determination of mepivacaine in blood, with a note on other local anesthetics, 432
- Preamesthetic agents, see also specific agents
effects on respiration and gas exchange [Smith & others], 883
effects on visually evoked responses [Domino], 184
- PRICE, H. L., Association of University Anesthetists (report of meeting), 955
—, and PRICE, M. L., Relative ganglion-blocking potencies of cyclopropane, halothane and nitrous oxide, and the interaction of nitrous oxide with halothane, 349
—, see LONG, G., jt. auth.
- PRICE, M. L., see PRICE, H. L., jt. auth.
- Prilocaine
fetal arrhythmia during caudal block with (current comment), 222
passage across placenta (abstract), 246
- PRINCE, D. A., see WAGMAN, I. H., jt. auth.
- Propanolol
metabolic effects of beta-adrenergic blockade with (abstract), 263
- Prosthesis
cardiac, in bovine animals, anesthesia for placement of (abstract), 270
- PRYS-ROBERTS, C., see KELMAN, G. R., jt. auth.
- Psychiatric patients
mechanical aid for positioning during anesthesia (current comment), 464
- Pulmonary: see Lungs
- Pyridostigmin
as antagonist of *d*-tubocurarine [Katz], 528
- Quinidine
potentiation of neuromuscular blocking agents [Miller & others], 1036
- RACKOW, H., see SALANITRE, E., jt. auth.
- RATTENBORG, C. C., see KRISTOFFERSEN, M. B., jt. auth.
—, see MATZ, C. J., jt. auth.
- RAVIN, M. D., see FEINBERG, G. L., jt. auth.
- RAYMOND, L. W., and STANDAERT, F. G., The respiratory effects of carbon dioxide in the cat, 974

- Rebreathing tube, see Apparatus and equipment
 REDDING, J. S., see PEARSON, J. W., jt. auth.
 REGAN, M. J., and EGER, E. I., II, Effect of hypothermia in dogs on anesthetizing and apneic doses of inhalation agents. Determination of the anesthetic index (apnea/MAC), 689
 REHDER, K., FORBES, J., ALTER, H., HESSLER, O., and STIER, A., Halothane biotransformation in man: A quantitative study, 711
 REIER, C. E., and WU, W., Intragastric cyclopropane—a potential explosion hazard (clinical workshop), 771
 Renal: see Kidney
 REPPERT, E. H., see IMPARATO, A. M., jt. auth.
 Respiration
 asphyxial death: roles of acute anoxia, hypercarbia and acidosis [Kristoffersen & others], 488
 deadspace requirement for normal alveolar ventilation during artificial respiration in man (abstract), 271
 effects of carbon dioxide on in the cat [Raymond & Standaert], 974
 effects of expiratory resistance on blood gas tensions in anesthetized patients [Cheney & others], 670
 effects of preanesthetic drugs on in man [Smith & others], 883
 effects of *d*-tubocurarine on respiratory resistance [Gerbershagen & Bergman], 981
 effects of varying pressure and flow rate settings of pressure-cycled respirators (clinical workshop), 1096
 effects of varying respiratory waveforms on gas exchange [Bergman], 390
 hyperventilation, effects on cerebral anesthetic equilibration [Munson & Bowers], 377
 hyperventilation, maternal during labor (editorial) [James], 805
 hyperventilation, spinal fluid and, during anesthesia in man (abstract), 251
 hypoventilation, acute alveolar, functional reduction of anatomical deadspace in (clinical workshop), 941
 inspiratory force measurement (correspondence), 235
 inspiratory force measurement with anesthesia circuit (current comment), 209
 phrenic nerve activity in hypercapnia and hypoxia [Garcia & Chernick], 1029
 respiratory work during anesthesia (abstract), 273
 ventilation, effects of methoxyflurane on in man [Dunbar & others], 1020
 ventilation, positive pressure, changes in arterial carbon dioxide tension during [Morgan & others], 866
 ventilation-cardiac compression rates and ratios in cardiopulmonary resuscitation [Harris & others], 806
 ventilatory reserve during high spinal and epidural anesthesia [Freund & others], 834
 Respirators: see Apparatus and equipment, respirators; also Apparatus and equipment, ventilators
 Resuscitation
 cardiopulmonary augmentation of artificial circulation during [Harris & others], 730
 cardiopulmonary, ventilation-cardiac compression rates and ratios in [Harris & others], 806
 RIVARD, G., see MOTYAMA, E. K., jt. auth.
 ROBSON, J. G., The effects of anesthetic drugs on cortical units, 144
 Roos, A., and THOMAS, L. J., The in-vitro and in-vivo carbon dioxide dissociation curves of true plasma. A theoretical analysis, 1048
 ROVENSTINE, E. A., Biographical data (E. A. Rovenstine Memorial Lecture) [Papper], 1074
 ROVENSTINE, E. A., Memorial Lecture [Papper], 1074
 SAFAR, P., and PENNINCKX, J., Cricothyroid membrane puncture with special cannula (clinical workshop), 943
 —, see HARRIS, L. C., jt. auth. (2)
 SAIDMAN, L. J., EGER, E. I., II, MUNSON, E. S., BABAD, A. A., and MUALLEM, M., Minimum alveolar concentrations of methoxyflurane, halothane, ether and cyclopropane in man: Correlation with theories of anesthesia, 994
 SAKLAD, M., and PALIOTTA, J., Trans-endotracheal tube suction in the simulated breathing patient, 652
 —, and WICKLIFF, D., Functional characteristics of artificial ventilators, 716
 —, WICKLIFF, D., and EUBANKS, D., A bailing device for the automatic removal of condensate from breathing tubes (clinical workshop), 951
 SALANITRE, E., WOLF, G. L., and RACKOW, H., Pulmonary exchange of divinyl ether in man, 535
 SALEM, M. R., An effective method for the treatment of hiccups during anesthesia (current comment), 463
 —, and EL ETR, A. A., Management of hemorrhage following induced hypotension (clinical workshop), 1104
 SALMOIRAGHI, G. C., and WEIGHT, F., Micromethods in neuropharmacology: An approach to the study of anesthetics, 54
 SANDLER, S. S., *A*ural block (comment), 786
 SAVRAN, S. V., see OTTLIEB, S. F., jt. auth.
 SCHETTINI, A., COOK, A. W., and OWRE, E. S., Hyperventilation in craniotomy for brain tumor, 363
 SCHWEIZER, O., HOWLAND, W. S., SULLIVAN, C., VERTES, E., The effect of ether and halothane on blood levels of glucose, pyruvate, lactate and metabolites of the tricarboxylic acid cycle in normotensive patients during operation, 814
 Scopolamine
 central and peripheral effects in man [Domino & Corssen], 568

- Seizures:** see **Convulsions**
- SELLERY, G. R.,** and **FAIRLEY, M. B.**, Inspired oxygen concentration delivered by the Bird ventilator (current comment), 453
- SESSLER, A. D.**, see **THEYE, R. A.**, jt. auth.
- SHIMOSATO, S., GAMBLE, C.,** and **ETSTEN, B. E.**, Differential effects of diethyl ether anesthesia on right and left myocardial function, 874
- SHNIDER, S. M.**, see **HOLL, J. W.**, jt. auth.
- Shock**
intestinal ischemic, reticuloendothelial phagocytic clearance as index of host response to (abstract), 256
- Shoes, conductive:** see **Apparatus and equipment**
- SHORT, C. E.**, First International Symposium on Electrosleep and Electroanesthesia (report of meeting), 638
- SIKER, E. S., WOLFSON, B., CICCARELLI, H. E.,** and **TELAN, R. A.**, Effect of subanesthetic concentrations of halothane and methoxyflurane on pain threshold in conscious volunteers, 337
—, see **WOLFSON, B.**, jt. auth.
- SINGER, M. M.**, On the selection of respirators (editorial), 485
- Skin**
cutaneous receptor responses during general anesthesia [de Jong & Nace], 851
- Sleep**
brain-stem mechanisms of [Zanchetti], 81
induction of by steroid hormones [Heuser], 173
neurophysiology of anesthesia [Winters & others], 65
- SMITH, D.**, see **COHEN, E. N.**, jt. auth.
- SMITH, J. C.**, see **ERNST, E. A.**, jt. auth.
- SMITH, N. T.,** and **WHITCHER, C.**, Acute hemodynamic effects of methoxamine in man, 735
—, see **CORBASCO, A. N.**, jt. auth.
- SMITH, T. C.**, Conductive shoes (clinical workshop), 954
—, **STEPHEN, G. W., ZEIGER, L.,** and **WOLLMAN, H.**, Effects of premedicant drugs on respiration and gas exchange in man, 883
—, see **DUNBAR, B. S.**, jt. auth.
—, see **FORBES, A. M.**, jt. auth.
- Sodium**
transport in toad bladder, synergistic effect of cyclopropane and epinephrine on [Anderson], 438
transport, nitrous oxide inhibition of [Gottlieb & Savran], 324
- Sodium bicarbonate**
treatment of postoperative idionodal hypertension with (current comment), 226
- Sodium citrate**
in experimental hypercitremia [Corbascio & Smith], 510
- SOMJEN, G.**, Effects of anesthetics on the spinal cords of mammals, 135
- Spasticity**
nerve stimulator for isolated block of musculocutaneous and perineal nerves in (current comment), 219
- SPIELBERGER, L.**, see **IMPARATO, A. M.**, jt. auth.
- Spinal canal, human,** construction of a model (clinical workshop), 939
- Spinal cord**
effects of anesthetics on mammalian [Somjen], 135
functional organization of [Eccles], 31
Spinal reflex response measurement during general anesthesia in man [de Jong & others], 382
- SPOONER, C. E.**, see **WINTERS, W. D.**, jt. auth.
- STANDAERT, F. G.**, see **RAYMOND, L. W.**, jt. auth.
- Statistics**
for the anesthesiologist (special article) [Mahler], 749
- Stellate ganglion block:** see **Nerve block, stellate ganglion**
- STEPHEN, C. R.**, see **AHLGREN, E. W.**, jt. auth.
- STEPHEN, G. W.**, see **SMITH, T. C.**, jt. auth.
- Steroid hormones**
induction of anesthesia, seizures and sleep by [Heuser], 173
- STIER, A.**, see **REHDER, K.**, jt. auth.
- STRESEMANN, E.**, Functional reduction of anatomical deadspace in the management of acute alveolar hypoventilation (clinical workshop), 941
—, Influence of various pressure and flow rate settings of pressure-cycled respirators on minute volumes, expiratory P_{CO_2} and P_{CO} , of normal men during IPPB (clinical workshop), 1096
- STRONG, M. J.,** and **KEATS, A. S.**, Induced hypothermia following cerebral anoxia, 920
- Succinylcholine**
burned patients, danger in use for (current comment), 467
burned patients, use for (correspondence), 234
clinical studies of [Walts & Dillon], 372
decamethonium and, neuromuscular block in man [de Jong & Freund], 583
neuromuscular block (correspondence), 791
- SULLIVAN, C.**, see **SCHWEIZER, O.**, jt. auth.
- Surgery**, see also specific surgical operations and organs
effects of ether and halothane on blood during [Schweizer & others], 814
- thoracic, anesthesia for** (editorial) [Bendixen], 649
thoracotomy, arterial blood oxygenation during thoracotomy using nitrous oxide-oxygen [Boutros & Weisel], 705
- SUWA, K.,** and **BENDIXEN, H. H.**, The inspiratory force measurement using the anesthesia circuit (current comment), 209
- SWEENEY, D. F.,** and **GARRISON, F. W.**, Portable IPPB with the Stryker Frame (clinical workshop), 626
- SWEITZER, R. S.**, see **WAUN, J. E.**, jt. auth.
- Sympathectomy, lumbar**
relief of arterial spasm by epidural block following (clinical workshop), 1107
- Teaching, A.S.A. Workshop on** (report of meeting), 1112

- TELAN, R. A., see SIKER, E. S., jt. auth.
- Temperature: see Hypothermia, Hypothermia, Normothermia
- TEMTE, J. V., HELMER, P. R., and DAVIS, L. D., Effects of calcium and cyclopropane on Purkinje fibers, 354
- THEYE, R. A., Blood O₂ content measurement using the O₂ electrode (clinical workshop), 773
- , myocardial and total oxygen consumption with halothane, 1042
- , and SESSLER, A. D., Effect of halothane anesthesia on rate of canine oxygen consumption, 661
- Thiopental
- effects on subcortical mechanisms in temporal lobe epilepsy [Brazier], 192
 - tissue concentrations in newborn (abstract), 248
- THOMAS, L. J., see ROOS, A., jt. auth.
- THOMAS, P. A., see MILLER, R. N., jt. auth.
- Thoracic surgery: see surgery, thoracic
- Thoracotomy: see also surgery, thoracic
- arterial blood oxygenation during (abstract), 239
- Time constants in anesthesiology (correspondence), 635, 636, 637
- TOLMIE, J. D., JOYCE, T. H., and MITCHELL, G. D., Succinylcholine danger in the burned patient (current comment), 467
- TORDA, T. A. G., FOLDÉS, F. F., BAILEY, R. J., KLONYMUS, D. H., and KUWABARA, S., The interactions of neuromuscular blocking agents in man: The role of hexafluorenium, 1010
- TOVELL, Ralph M. (obituary), 307
- Toxic effects of anesthetics, symposium on (report of meeting), 956
- Trachea
- endotracheal tube, pediatric, factors affecting size (clinical workshop), 779
 - trans-endotracheal tube suction in simulated breathing patients [Saklad & Paliotta], 652
- Tracheoesophageal cleft (clinical workshop), 633
- Tracheotomy
- cricothyrotomy compared with (clinical workshop), 943
- TRUDNOWSKI, R. J., see MOSTERT, J. W., jt. auth.
- d*-Tubocurarine
- effect on respiratory resistance in anesthetized man [Gerbershagen & Bergman], 981
 - interaction of halothane with [Katz & Gissen], 564
 - metabolism and elimination [Cohen & others], 309
 - neuromuscular blockade by in children [Long & Bachman], 723
 - neuromuscular effects in man [Katz], 327
 - in prolonged anesthesia, overcurarization, and resection of the abdominal wall (current comment), 231
 - pyridostigmin as antagonist of [Katz], 528
 - use in renal failure [Churchill-Davidson & others], 540
- ULLRICK, W. C., see GOLDBERG, A. H., jt. auth.
- UNDERWOOD, R. J., GOWING, D., and JOHNSTON, G. I., Effect of changes in blood volume on body impedance, 426
- University Anesthetists, Association of (report of meeting), 955
- Urea
- effects on red cells during hypothermia and general anesthesia (abstract), 265
- U.S.S.R.
- American anesthesiologist in Moscow [Fink], 764
- VANDAM, L. D., College of Physicians and Surgeons Jubilee (editorial), 295
- , Good news from the Middle East (editorial), 486
- , see DEUTSCH, S., jt. auth.
- VAN POZNAK, A., The effect of inhalation anesthetics on repetitive activity generated at motor nerve endings, 124
- Vaporizer: see Apparatus and equipment, inhaler
- Vasodilatation
- effect on metabolic and hemodynamic parameters during and after cardiopulmonary bypass (abstract), 253
 - effect on metabolic and hemodynamic parameters during and after cardiopulmonary bypass [Glushien & Harris], 985
- Veins
- central venous pressure via peripheral veins (clinical workshop), 1093
- Ventilator
- see Apparatus and equipment, ventilator; also, Apparatus and equipment, respirator
- VERTES, E., see SCHWEIZER, O., jt. auth.
- VILJOEN, J. F., A new double-lumen endobronchial tube connector (clinical workshop), 950
- VILLANDRY, P. J., see AUSTIN, W. H., jt. auth.
- VIRTUE, R. W., ALANIS, J. M., MORI, M., LAFARGUE, R. T., VOGL, J. H. K., and METCALF, D. R., An anesthetic agent: 2-orthochlorophenyl, 2-methylamino cyclohexanone HCl (CI-581), 823
- Visually evoked responses, effects of preanesthetic and anesthetic drugs on [Domino], 184
- VOGEL, J. H. K., see VIRTUE, R. W., jt. auth.
- WAGMAN, I. H., DE JONG, R. H., PRINCE, D. A., Effects of lidocaine on the central nervous system, 155
- , see DE JONG, R. H., jt. auth.
- WALL, P. D., The mechanisms of general anesthesia, 46
- , Neurophysiological studies on the mechanism of anesthesia (editorial), 799
- WALTS, L. F., and DILLON, J. B., Clinical studies on succinylcholine chloride, 372
- WARD, R. J., see FREUND, F. G., jt. auth.
- WARNER, W. A., Laryngeal band: Possible relation to prolonged nasotracheal intubation (current comment), 466

- WARRINGTON, H. P., see PRATT, E. L., jt. auth.
- WATERS, D. J., see MAPLESON, W. W., jt. auth.
- Waters, Ralph M., biographical data, 201
- Waters, Ralph M., Award Lecture, 201
- WATSON, T. R., JR., see HELLER, M. L., jt. auth.
- WAUN, J. E., SWEITZER, R. S., and HAMILTON, W. K., Effect of nitrous oxide on middle ear mechanics and hearing acuity, 846
- WAY, W. L., see CHURCHILL-DAVIDSON, H. C., jt. auth.
- , see MILLER, R. D., jt. auth.
- WEIGHT, F., see SALMOIRAGHI, G. C., jt. auth.
- WEISEL, M. R., see BOUTROS, A. R., jt. auth.
- WEITZNER, S. W., see AMAHA, K., jt. auth.
- WHANG, T. B., see COLGAN, F. J., jt. auth.
- WHITCHER, C., see SMITH, N. T., jt. auth.
- WICKLIFF, D., see SAKLAD, M., jt. auth. (2)
- WILLENKIN, R. L., A.S.A. Workshop on Teaching (report of meeting), 1112
- WINTERS, W. D., MORI, K., SPOONER, C. E., and BAUER, R. O., The neurophysiology of anesthesia, 65
- WOLF, G. L., see SALANITRE, E., jt. auth.
- WOLFSON, B., SIKER, E. S., CICCARELLI, H. E., GRAY, G. H., JR., and JONES, L., The electroencephalogram as a monitor of arterial blood levels of methoxyflurane, 1003
- , see SIKER, E. S., jt. auth.
- WOLLMAN, H., see SMITH, T. C., jt. auth.
- WU, W., see REIER, C. E., jt. auth.
- Xenon
and xenon-halothane in study of basic anesthetic mechanisms in man (abstract), 243
- YOKOTA, T., HITOMI, Y., OHTA, K., and KOSAKA, F., Direct injection method for gas chromatographic measurement of inhalation anesthetics in whole blood and tissues, 1064
- ZANCHETTI, A., Brain stem mechanisms of sleep, 81
- ZAPP, J., see BUTLER, R. A., jt. auth.
- ZAUDER, H. L., see EDELSTAD, G., jt. auth.
- ZEFFIRO, R. G., see MARTIN, S. J., jt. auth.
- ZEIGER, L., see SMITH, T. C., jt. auth.

Anesthesiology

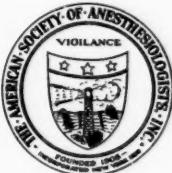
The Journal of
The American Society of
Anesthesiologists, Inc.

Editor
LEROY D. VANDAM, Boston

Associate Editors
JOHN ADRIANI · HAMILTON S. DAVIS
ARTHUR S. KEATS · C. PHILIP LARSON, JR.
NICHOLAS M. GREENE · S. C. HERSEY

Assistant Editor
MEREL H. HARMEL

VOLUME 28 • 1967



Volume 28

Copyright © 1967 by

THE AMERICAN SOCIETY OF ANESTHESIOLOGISTS, INC.

**Printed in the
United States of America**

CONTENTS • VOLUME 28

NUMBER 1, JANUARY-FEBRUARY, 1967

Conference on Neurophysiology in Relation to Anesthesiology

Foreword. <i>B. Raymond Fink</i>	1
Preface. <i>Sir John C. Eccles</i>	2
Perspectives. <i>John J. Bonica</i>	4

Methods of Research

Fine Structure of Cell Contact and the Synapse. <i>Douglas E. Kelly</i>	6
Functional Organization of the Spinal Cord. <i>Sir John C. Eccles</i>	31
The Mechanisms of General Anesthesia. <i>Patrick D. Wall</i>	46
Micromethods in Neuropharmacology: an Approach to the Study of Anesthetics. <i>G. C. Salmoiragh and F. Weight</i>	54

Sleep and Consciousness

The Neurophysiology of Anesthesia. <i>Wallace D. Winters, Kenjiro Mori, Charles E. Spooner and Robert O. Bauer</i>	65
Brain Stem Mechanisms of Sleep. <i>Alberto Zanchetti</i>	81
Chemical Transmission and Cortical Arousal. <i>K. Krnjević</i>	100
Pain Mechanisms. <i>Robert K. S. Lim</i>	106

Effects of Anesthetics on Neural Mechanisms

Selective Actions of Volatile Anesthetics on Synaptic Transmission and Autorhythmicity in Single Identifiable Neurons. <i>N. Chalazonitis</i>	111
The Effect of Inhalation Anesthetics on Repetitive Activity Generated at Motor Nerve Endings. <i>Alan Van Poznak</i>	124
The Effect of Volatile Anesthetic Agents on Neuromuscular Transmission. <i>J. H. Karis, A. J. Gissen and W. L. Nastuk</i>	128
Effects of Anesthetics on Spinal Cord of Mammals. <i>G. Somjen</i>	135
The Effects of Anesthetic Drugs on Cortical Units. <i>J. G. Robson</i>	144
Effects of Lidocaine on the Central Nervous System. <i>Irving H. Wagman, Rudolph H. de Jong and David A. Prince</i>	155
Induction of Anesthesia, Seizures and Sleep by Steroid Hormones. <i>Gunnar Heuser</i>	173
Effects of Preanesthetic and Anesthetic Drugs on Visually Evoked Responses. <i>Edward F. Domino</i>	184
Thiopental: Effects on Subcortical Mechanisms in Temporal Lobe Epilepsy. <i>Mary A. B. Brazier</i>	192

Ralph M. Waters Award Lecture

Preamble. <i>Vincent J. Collins</i>	201
The Heritages of the Past Are the Privileges of the Future. <i>Sir Iean Magill</i>	202

Current Comment

The Inspiratory Force Measurement Using the Anesthesia Circuit. <i>K. Suwa and H. H. Bendixen</i>	209
Evaluation of a Rebreathing Tube for Preventing Atelectasis. <i>Gerald Edelist and Louis R. Orkin</i>	211

Gadgets. A Simplified, Trouble-Free Transducer Holder. <i>William B. Gerecke</i>	213
Epiglottic Elevator. <i>Martin Livingston and Robert Durell</i>	214

A Quantitative Technique for the Evaluation of Peripheral Neuromuscular Blockade in Man. <i>A. Sam Nemazie and Richard J. Kitz</i>	215
An Anesthetic Machine for Small Mammals. <i>A. G. Jacobs</i>	217
Isolated Block of Musculocutaneous and Perineal Nerves in the Management of Spasticity with Special Reference to the Use of a Nerve Stimulator. <i>Ali A. Khalili and Henry B. Betts</i>	219
Case Reports. Fetal Arrhythmia During Caudal Block with Prilocaine. <i>Gertie F. Marx</i>	222
Persistent Postoperative Idionodal Hypotension Treated with Minimal Bicarbonate. <i>Jacobus W. Mostert and Raymond J. Trudnowski</i>	226
Exaggerated Spread of Epidural Block. <i>Ray J. Defalque</i>	229
Prolonged Anesthesia, Overcurarization, and Resection of the Abdominal Wall. <i>Michael H. M. Dykes</i>	231
Correspondence	
Use of Succinylcholine in Burned Patients. <i>T. M. McCaughey, 234—Edward Loewenstein, 234</i>	
Inspiratory Force Measurement. <i>Philip S. Marcus, 235</i>	
"Work in Progress" Abstracts	237
Reports of Scientific Meetings	279
The Anesthesiologist's Bookshelf	283
Literature Briefs	287
NUMBER 2, MARCH-APRIL, 1967	
Editorial Views	
College of Physicians and Surgeons Jubilee. <i>Leroy D. Vandam</i>	295
No Mischievous Witchcraft. Anesthesiology in 1967, Bicentennial Year of the College of Physicians and Surgeons. <i>Lester C. Mark, Richard J. Kitz and Leonard Brand</i>	296
Obituary	
Ralph Moore Tovell, 1901-1967. <i>David M. Little, Jr.</i>	307
Original Articles	
The Metabolism and Elimination of <i>d</i> -Tubocurarine-H ³ . <i>Ellis N. Cohen, H. Winslow Brewer and Dana Smith</i>	309
Measurement of Anti-Arrhythmic Potency of Drugs in Man: Effects of Dehydrobenzperidol. <i>G. Long, R. D. Dripps and H. L. Price</i>	318
Nitrous Oxide Inhibition of Sodium Transport. <i>Sheldon F. Gottlieb and Stephen V. Savran</i>	324
Neuromuscular Effects of <i>d</i> -Tubocurarine, Edrophonium and Neostigmine in Man. <i>Ronald L. Katz</i>	327
Effect of Subanesthetic Concentrations of Halothane and Methoxyflurane on Pain Threshold in Conscious Volunteers. <i>E. S. Siker, Bernard Wolfson, Harold E. Ciccarelli and Rubin A. Telan</i>	337
Placental Clearance of Mepivacaine Following Administration to the Guinea Pig Fetus. <i>Hisayo O. Morishima and Karlis Adamsons</i>	343
Relative Ganglion-Blocking Potencies of Cyclopropane, Halothane and Nitrous Oxide, and the Interaction of Nitrous Oxide with Halothane. <i>Henry L. Price and Mary L. Price</i>	349
Effects of Calcium and Cyclopropane on Purkinje Fibers. <i>John V. Temte, Phyllis R. Helmer and Larry D. Davis</i>	354
Hyperventilation in Craniotomy for Brain Tumor. <i>Alfonso Schettini, Albert W. Cook and E. Stewart Owre</i>	363

CONTENTS

V

Clinical Studies on Succinylcholine Chloride. <i>Leonard F. Walts and John B. Dillon</i>	372
Effects of Hyperventilation on the Rate of Cerebral Anesthetic Equilibration. Calculations Using a Mathematical Model. <i>Edwin S. Munson and Donald L. Bowers</i>	377
Measurement of a Spinal Reflex Response (H-Reflex) During General Anesthesia in Man. Association Between Reflex Depression and Muscular Relaxation. <i>Rudolph H. de Jong, William N. Hershey and Irving H. Wagman</i>	382
Effects of Varying Respiratory Waveforms on Gas Exchange. <i>Norman A. Bergman</i>	390
Review	
Hazards of Electrical Apparatus. <i>John M. R. Bruner</i>	396
Progress Report	
Effect of Changes in Blood Volume on Body Impedance. <i>Rex J. Underwood, David Gowing and George I. Johnston</i>	426
Laboratory Methods	
The Gas Chromatographic Determination of Mepivacaine in Blood with a Note on Other Local Anesthetics. <i>E. L. Pratt, H. P. Warrington and J. Grego</i>	432
Biophysical Observations	
Synergistic Effect of Cyclopropane and Epinephrine on Sodium Transport in Toad Bladder. <i>N. B. Andersen</i>	438
Annals of Anesthetic History	
How "Indian Arrow Poison" Curare Became a Useful Drug. <i>A. E. Bennett</i>	446
Current Comment	
Inspired Oxygen Concentration Delivered by the Bird Ventilator. <i>G. R. Sellery and H. B. Fairley</i>	453
Clinical Studies with Innovar. <i>Stevens J. Martin, John D. Murphy, Robert J. Colliton and Ronald G. Zeffiro</i>	458
An Effective Method for the Treatment of Hiccups During Anesthesia. <i>M. R. Salem</i>	463
Gadget. A Mechanical Aid for Positioning Psychiatric Patients for Spinal and Epidural Anesthesia. <i>Ludwig L. Blum</i>	464
Case Reports. Laryngeal Band: Possible Relation to Prolonged Naso-Tracheal Intubation. <i>Willis A. Warner</i>	466
Succinylcholine Danger in the Burned Patient. <i>John D. Tolmie, Thomas H. Joyce and George D. Mitchell</i>	467
Serious Defects in "Simple" Equipment. <i>Frederic A. Berry, Jr., and D. W. Eastwood</i>	471
Reports of Scientific Meetings	472
Literature Briefs	475

NUMBER 3, MAY-JUNE, 1967

Editorial Views

On the Selection of Respirators. <i>Morley M. Singer</i>	485
Good News from the Middle East. <i>Leroy D. Vandam</i>	486

Original Articles

Asphyxial Death: The Roles of Acute Anoxia, Hypercarbia and Acidosis. <i>Mogens B. Kristoffersen, Christen C. Rattenborg and Duncan A. Holaday</i>	488
Effects of Constant Chest Compression on the Mechanical and Physiologic Performance of Different Ventilators. <i>Keisuke Amaha, Philip Liu, Stanley W. Weitzner and Merel H. Harmel</i>	498

Hemodynamic Effects of Experimental Hypercitremia. <i>Aldo N. Corbascio and N. Ty Smith</i>	510
Components of the Alveolar-Arterial Oxygen Tension Difference in Anesthetized Man. <i>Norman A. Bergman</i>	517
Pyridostigmin (Mestinon) as an Antagonist of <i>d</i> -Tubocurarine. <i>Ronald L. Katz</i>	528
Pulmonary Exchange of Divinyl Ether in Man. <i>Ernest Salanitre, Gerald L. Wolf and Herbert Rackow</i>	535
The Muscle Relaxants and Renal Excretion. <i>Harry C. Churchill-Davidson, Walter L. Way and Rudolph H. de Jong</i>	540
Cyclopropane Effects on Renal Function in Normal Man. <i>Stanley Deutsch, Ellison C. Pierce, Jr., and Leroy D. Vandam</i>	547
A Method for Measuring the Functional Residual Capacity and Dynamic Lung Compliance During Oxygen and Halothane Inhalation. <i>Frank J. Colgan and Tae B. Whang</i>	559
Neuromuscular and Electromyographic Effects of Halothane and its Interaction with <i>d</i> -Tubocurarine in man. <i>Ronald L. Katz and Aaron J. Gissen</i>	564
Central and Peripheral Effects of Muscarinic Cholinergic Blocking Agents in Man. <i>Edward F. Domino and Guenter Corsen</i>	568
Anesthetic Management of Pheochromocytoma Employing Halothane and Beta Adrenergic Blockade. A Report of Fourteen Cases. <i>Lee H. Cooperman, Karl Engelman and Phillip E. G. Mann</i>	575
Characteristics of the Neuromuscular Block With Succinylcholine and Decamethonium in Man. <i>Rudolph H. de Jong and Felix G. Freund</i>	583
Review	
Physiology and Pharmacology of Epidural Analgesia. <i>Philip R. Bromage</i>	592
Clinical Workshop	
Evaluation of the Elder Demand Valve Resuscitator for Use by First-Aid Personnel. <i>John W. Pearson and Joseph S. Redding</i>	623
Bedside Measurement of Carbon Dioxide Response. <i>Gerald Edelist and Howard L. Zauder</i>	624
Self-Powered Atomizer. <i>E. R. Malia</i>	625
Portable IPPB with the Stryker Frame. <i>Donal F. Sweeney and Frank W. Garrison</i>	626
A Positioning Guide for Intrathecal Blocks. <i>Rita Goldman Jacobs and Hwa Kuo King</i>	627
Case Reports. Stellate Ganglion Block in a Patient with Cryofibrinogenemia. <i>Jordan Katz</i>	628
Spontaneous Bilateral Pneumothorax in a Newborn Infant. <i>O. C. James and Gertie F. Marx</i>	629
Continuous Stellate Ganglion Block. <i>Robert P. Geraci</i>	632
Tracheoesophageal Cleft. <i>A. V. Budris, M. Lippman and P. H. Lorhan</i>	633
Correspondence	
Time Constants in Anesthesiology. <i>W. W. Mapleson and D. J. Waters, 635—Harold L. Engel, 636—B. Raymond Fink, 637</i>	
Methoxyflurane and Renal Function. <i>William H. Austin and Philip J. Villandry, 637</i>	
Reports of Scientific Meetings	638
The Anesthesiologist's Bookshelf	643
Literature Briefs	646

CONTENTS

vii

NUMBER 4, JULY-AUGUST, 1967

Editorial Views

- Anesthesia for Thoracic Surgery. *Henrik H. Bendixen* 649
 Metabolism of Halothane. *Ellis N. Cohen* 651

Original Articles

- Trans-Endotracheal Tube Suction in the Simulated Breathing Patient. *Meyer Saklad and Joseph Paliotta* 652
 Effect of Halothane Anesthesia on Rate of Canine Oxygen Consumption. *Richard A. Theye and Alan D. Sessler* 661
 The Effect of Expiratory Resistance on the Blood Gas Tensions of Anesthetized Patients. *Frederick W. Cheney, Thomas F. Hornbein and Edward W. Crawford* 670
 Cyclopropane: Effect on Catecholamine Biotransformation. *Robert W. Gardier, Gerald L. Endahl and William Hamelberg* 677
 Effect of Chronic Exposure to Ultrasonic Aerosols on the Lung. *Jerome H. Modell, Samuel T. Giannonna and Joseph H. Davis* 680
 Effect of Hypothermia in Dogs on Anesthetizing and Apneic Doses of Inhalation Agents. Determination of the Anesthetic Index (Apnea/MAC). *Michael J. Regan and Edmund I. Eger, II* 689
 Urinary Epinephrine and Norepinephrine During Innovar-Nitrous Oxide Anesthesia in Man. *A. H. Giesecke, Jr., M. T. Jenkins, J. R. Crout and J. M. Collett* 701
 Arterial Blood Oxygenation During Thoracotomy Using 70 Per Cent Nitrous Oxide in Oxygen. *Azmy R. Boutros and Mary R. Weisel* 705
 Halothane Biotransformation in Man: A Quantitative Study. *Kai Rehder, Joseph Forbes, Helmuth Alter, Otto Hessler and Anton Stier* 711
 Functional Characteristics of Artificial Ventilators. *Meyer Saklad and David Wickliff* 716
 Neuromuscular Blockade by *d*-Tubocurarine in Children. *Geoffrey Long and Leonard Bachman* 723
 Augmentation of Artificial Circulation During Cardiopulmonary Resuscitation. *Leroy C. Harris, Bulent Kirimli and Peter Safar* 730
 Acute Hemodynamic Effects of Methoxamine in Man. *N. Ty Smith and Charles Whitcher* 735

Special Article

- Elementary Statistics for the Anesthesiologist. *Donald L. Mahler* 749

Laboratory Methods

- The Determination of Hydrocarbon Anesthetics in Blood by Gas Chromatography. *R. A. Butler, A. B. Kelly and J. Zapp* 760

The International Scene

- An American Anesthesiologist in Moscow. *B. Raymond Fink* 764

Clinical Workshop

- Methoxyflurane Concentrations from the Cyprane Inhaler. *John W. Holl and Sol M. Shnider* 770
 Intragastric Cyclopropane—A Potential Explosion Hazard. *Charles E. Reier and Wen-hsien Wu* 771
 Blood O₂ Content Measurement Using the O₂ Electrode. *Richard A. Theye* 773
 Obturator Nerve Block: A Simplified Approach. *Colby R. Parks and William F. Kennedy, Jr.* 775
 Factors Affecting Pediatric Endotracheal Tube Size: A Statistical Analysis. *Peter Chodoff and Martin Helrich* 779

Case Reports. Multiple General Anesthesias, Gastro-Esophageal Reflux and Spontaneous Esophageal Rupture. <i>Gerald L. Feinberg and Mark B. Ravin</i>	782
An Unusual Cause of Laryngeal Obstruction. <i>Ennio Gallozzi</i>	784
Isolated Neurologic Deficit Following Spinal Anesthesia. <i>Jay S. Finch and Samuel H. Carter</i>	785
Comment. Epidural Block. <i>Seymour J. Sandler, 786—Ray J. Defalque, 786</i>	
Correspondence	
Acid-Base Balance. <i>Gabriel G. Nahas, 787</i>	
Resuscitation of the Newborn Infant. <i>Julius H. Bolgia, 789</i>	
Cardiac Pacemakers. <i>Anthony M. Imparato, Edmund H. Reppert, Lawrence Spielberg and Valentino D. B. Mazzia, 790—Armand A. Lefevre, 790</i>	
Succinylcholine Neuromuscular Block. <i>Aaron J. Gissen, Johannes H. Karis and Ronald L. Katz, 791—J. F. Crul, 791</i>	
Literature Briefs	792

NUMBER 5, SEPTEMBER-OCTOBER, 1967

Editorial Views	
Neurophysiological Studies on the Mechanism of Anesthesia. <i>Patrick D. Wall</i>	799
On the Measurement of Myocardial Contractility. <i>John R. Blinks</i>	800
Maternal Hyperventilation During Labor. <i>L. Stanley James</i>	804
Original Articles	
Ventilation—Cardiac Compression Rates and Ratios in Cardiopulmonary Resuscitation. <i>Leroy C. Harris, Bulent Kirimli and Peter Safar</i>	806
The Effect of Ether and Halothane on Blood Levels of Glucose, Pyruvate, Lactate and Metabolites of the Tricarboxylic Acid Cycle in Normotensive Patients During Operation. <i>Olga Schweizer, William S. Howland, Colleen Sullivan and Elizabeth Vertes</i>	814
An Anesthetic Agent: 2-Orthochlorophenyl, 2-Methylamino Cyclohexanone HCl (CI-581). <i>Robert W. Virtue, Joseph M. Alanis, Masahiro Mori, Robert T. Lafargue, John H. K. Vogel and David R. Metcalf</i>	823
Ventilatory Reserve and Level of Motor Block During High Spinal and Epidural Anesthesia. <i>Felix G. Freund, John J. Bonica, Richard J. Ward, Toshio J. Akamatsu and William F. Kennedy, Jr.</i>	834
Effects of Halothane on Isometric Contractions of Isolated Heart Muscle. <i>Alan H. Goldberg and William C. Ullrich</i>	838
Effect of Nitrous Oxide on Middle Ear Mechanics and Hearing Acuity. <i>James E. Waun, Richard S. Sweitzer and William K. Hamilton</i>	846
Nerve Impulse Conduction and Cutaneous Receptor Responses During General Anesthesia. <i>Rudolph H. de Jong and Roger A. Nace</i>	851
Narcotic Properties of Carbon Dioxide in the Dog. <i>John H. Eisele, Edmond I. Eger, II, and Musa Muillem</i>	856
Hemodynamic Effects of Changes in Arterial Carbon Dioxide Tension During Intermittent Positive Pressure Ventilation. <i>Beverly C. Morgan, Edward W. Crawford, Thomas F. Hornbein, Wayne E. Martin and Warren G. Guntheroth</i>	866
Differential Effects of Diethyl Ether Anesthesia Upon Right and Left Myocardial Function. <i>Shiro Shimamoto, Charles Gamble and Benjamin E. Etstern</i>	874
Effects of Premedication Drugs on Respiration and Gas Exchange in Man. <i>Theodore C. Smith, George W. Stephen, Louis Zeiger and Harry Wollman</i>	883
The Effect of Changes in Maternal pH and P_{CO_2} on the P_{O_2} of Fetal Lambs. <i>Etsuro K. Motoyama, Guy Ricard, Fiona Acheson and Charles D. Cook</i>	891

CONTENTS

ix

Effect of Nitrous Oxide Uptake on Arterial Oxygenation. <i>Morris L. Heller, T. Richard Watson, Jr., and Denis S. Imredy</i>	904
Effect of Cyclopropane Anesthesia on Glucose Assimilation Coefficient of Man. <i>Frank W. Cervenka and Nicholas M. Greene</i>	914
Medical Intelligence	
Induced Hypothermia Following Cerebral Anoxia. <i>M. Jerome Strong and Arthur S. Keats</i>	920
Laboratory Methods	
The Estimation of Mepivacaine Hydrochloride in Biological Fluids. <i>Salha S. Daniel and Hisayo O. Morishima</i>	924
Analysis of Oxygen, Carbon Dioxide and Nitrous Oxide Mixtures with the Scholander Apparatus. <i>A. Millar Forbes, Marjam G. Behar and Theodore C. Smith</i>	928
Technical Note	
The Stability of Solutions of Acetylcysteine to Oxidation During Nebulization. <i>Eugene E. Hamlow and Garnet E. Peck</i>	934
Clinical Workshop	
Axillary Block and Sedation for Cardiac Catheterization. <i>G. W. N. Eggers, Jr., M. T. Metzgar and J. E. Plumlee</i>	938
Construction of a Human Spinal Canal Model. <i>Edward A. Ernst</i>	939
Functional Reduction of Anatomical Dead Space in the Management of Acute Alveolar Hypoventilation. <i>E. Stremann</i>	941
Cricothyroid Membrane Puncture with Special Cannula. <i>Peter Safar and Jean Penninckx</i>	943
Effects of Nitrous Oxide on Middle Ear Pressure. <i>Gregory J. Matz, Christen G. Rattenborg and Duncan A. Holaday</i>	948
A New Double Lumen Endobronchial Tube Connector. <i>John F. Viljoen</i>	950
A Bailing Device for the Automatic Removal of Condensate from Breathing Tubes. <i>Meyer Saklad, David Wickliff and David Eubanks</i>	951
A New Mechanical Ventilator for Use During Anesthesia. <i>E. Warner Ahlgren and C. Ronald Stephen</i>	952
Comment. Conductive Shoes. <i>Theodore C. Smith</i>	954
Reports of Scientific Meetings	
Literature Briefs	
NUMBER 6, NOVEMBER-DECEMBER, 1967	
Editorial Views	
A Matter of Definition. <i>E. M. Papper</i>	969
Clinical Workshop. <i>S. G. Hershey</i>	973
Original Articles	
The Respiratory Effects of Carbon Dioxide in the Cat. <i>Lawrence W. Raymond and Frank G. Standart</i>	974
The Effect of d-Tubocurarine on Respiratory Resistance in Anesthetized Man. <i>Hans U. Gerbershagen and Norman A. Bergman</i>	981
The Effect of Vasodilatation on Metabolic and Hemodynamic Parameters During and After Cardiopulmonary Bypass. <i>Thomas M. Glushien and Leroy C. Harris, Jr.</i>	985
Minimum Alveolar Concentrations of Methoxyflurane, Halothane, Ether, and Cyclopropane in Man: Correlation with Theories of Anesthesia. <i>Lawrence J. Saidman, Edmond I. Eger, II, Edwin S. Munson, Arthur A. Babad and Musa Mualem</i>	994
The Electroencephalogram as a Monitor of Arterial Blood Levels of Methoxyflurane. <i>B. Wolfson, E. S. Siker, H. E. Ciccarelli, G. H. Gray, Jr., and L. Jones</i>	1003

The Interactions of Neuromuscular Blocking Agents in Man: The Role of Hexafluorenium. <i>T. A. G. Torda, F. F. Foldes, R. J. Bailey, D. H. Klonymus and S. Kuwabara</i>	1010
The Effects of Methoxyflurane on Ventilation in Man. <i>Burdett S. Dunbar, Andranik Ovassapian and Theodore C. Smith</i>	1020
Integrated Phrenic Activity in Hypercapnia and Hypoxia. <i>Adriana Garcia and Neil S. Cherniack</i>	1029
The Potentiation of Neuromuscular Blocking Agents by Quinidine. <i>Ronald D. Miller, Walter L. Way and B. G. Katzung</i>	1036
Myocardial and Total Oxygen Consumption with Halothane. <i>Richard A. Theye</i>	1042
Special Article	
The In-Vitro and In-Vivo Carbon Dioxide Dissociation Curves of True Plasma: A Theoretical Analysis. <i>Albert Roos and Lewis J. Thomas, Jr.</i>	1048
Laboratory Methods	
Direct Injection Method for Gas Chromatographic Measurement of Inhalation Anesthetics in Whole Blood and Tissues. <i>Terukazu Yokota, Yasumitsu Hitomi, Kosuke Ohta and Futami Kosaka</i>	1064
E. A. Rovenstine Memorial Lecture	
Regional Anesthesia—A Critical Assessment of Its Place in Therapeutics. <i>E. M. Papper</i>	1074
Clinical Workshop	
A Pharmacogenetic Study of a Family Exhibiting Atypical and "Silent" Genes for Plasma Cholinesterase. <i>Edward A. Ernst and J. Crispin Smith</i>	1085
Pulmonary Surfactant: Determinations from Lung Extracts of Patients Receiving Diethyl Ether or Halothane. <i>R. N. Miller and P. A. Thomas</i>	1089
Central Venous Pressures via Peripheral Veins. <i>Marsh H. Holt</i>	1093
Influence of Various Pressure and Flow Rate Settings of Pressure-Cycled Respirators on Minute Volumes, Expiratory PO ₂ and PCO ₂ of Normal Men During IPPB. <i>R. Stresemann</i>	1096
A Modified Cuvette Densitometer. <i>G. R. Kelman and C. Prys-Roberts</i>	1101
A Convenient and Accurate Nebulizer. <i>Martin I. Gold</i>	1102
Case Reports. Management of Hemorrhage Following Induced Hypotension. <i>M. R. Salem and A. A. El Etr</i>	1104
An Unexpected Complication (Hypothermia) While Using the Emerson Postoperative Ventilator. <i>Terry J. Kirch and Thomas J. DeKornfeld</i>	1106
Relief of Arterial Spasm by Epidural Block in a Sympathectomized Patient. <i>Adel A. El Etr</i>	1107
Correspondence	
Patient Consent. <i>B. Raymond Fink, 1109—Robert D. Dripps, 1109</i>	
Metabolic Effects of Blood Transfusion: Acid-Base Balance. <i>John P. Bunker, 1110</i>	
Reports of Scientific Meetings	1112
Literature Briefs	1115

